PROF. WILLIAMS'

NEW SYSTEM.

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WILLIAMS'

NEW SYSTEM

OF

HANDLING AND EDUCATING THE HORSE,

TOGETHER WITH

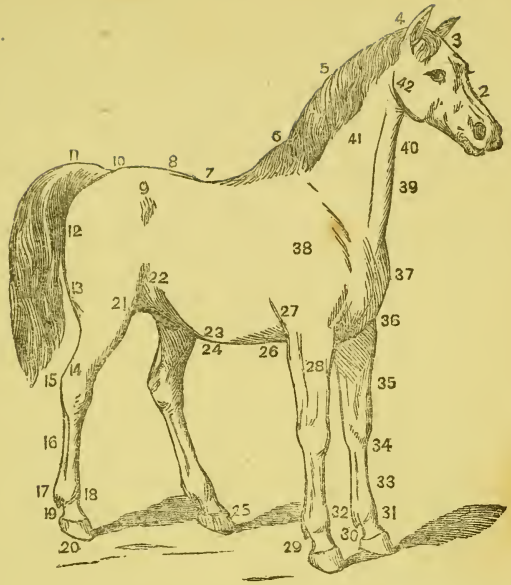
DISEASES AND THEIR TREATMENT.

By C. H. C. WILLIAMS.

ALSO

A TREATISE ON SHOEING; EDUCATING CATTLE AND DOGS, WITH HINTS ON STABLE MANAGEMENT; WITH THE RULES AND REGULATIONS OF TROTTING, RACING AND BETTING.

CLAREMONT, N. H.:
CLAREMONT MANUFACTURING COMPANY, PRINTERS.
1878.



NAMES AND SITUATIONS OF THE EXTERNAL PARTS OF THE HORSE.

1. Muscles.
2. Face.
3. Forehead.
4. Poll.
5. Crest.
6. Withers.
7. Back.
8. Loins.
9. Hip.
10. Croup.
11. Dock.
12. Quarters.
13. Thigh.
14. Hamstring.
15. Hock.
16. Cannon.
17. Fetlock.
18. Large Pastern.
19. Small Pastern.
20. Hoof.
21. Sheath.
22. Flank.
23. Belly.
24. Stifle.
25. Coronet.
26. Girth.
27. Elbow.
28. Arm.
29. Heel.
30. Small Pastern.
31. Large Pastern.
32. Fetlock.
33. Cannon or Shank.
34. Knee.
35. Forearm.
36. Breast.
37. Point.
38. Shoulder.
39. Windpipe.
30. Gullet.
41. Neck.
42. Jowl.

HISTORY

OF THE

CELEBRATED HORSES

TRAINED AND EXHIBITED BY

C. H. C. WILLIAMS.

MORGAN TIGER.

This famous horse was bred by Lafayette Knapp, Middlesex, Vt.; is a beautiful bay, with black mane and tail, one hind foot white; weighs 1050 pounds; is eight years old, and in style and action is unsurpassed.

He was sired by the "Old Flying Morgan," and in speed and endurance is fully his equal in his best days.

His dam was a full blooded "Justin Morgan."

Previous to my purchasing this horse, he had been under training by the "Rockwell System," which failing, he was left more vicious and unmanageable than before. (He was a sullen, bolting, plunging, runaway horse, and had become perfectly unmanageable by Mr. Lamson, of whom I purchased him.) In ten days after applying my system, he became perfectly tractable, and was successfully exhibited in Wentworth, N. H., as a "Trick Horse," and driven through the streets *without reins*, by Professor Williams. He has been on constant exhibition for a little more than two years, and is judged to be the *most thoroughly trained horse in America.*

GENERAL MAC.

This horse was raised by Wm. D. Huntly, at Mexico, Oswego, Co., N. Y., and is eight years old.

He exhibits the most perfect characteristics of a full-blooded Morgan horse we have ever seen; is a blood-bay, with black mane and tail. His mane is very heavy and fine, measuring *three feet and six inches in length.*

This was a very *wicked* runaway horse, and perfectly ungovernable in harness. He is now under training, to be driven *double* with "Morgan Tiger," without reins, and is making rapid progress. After one week's training he made a *graceful* appearance in the streets of Bradford, Vt., driven by Prof. Williams, without reins, amid the cheers of the throng who had gathered to witness the feat.

Gen. Mac. and Morgan Tiger, (driven together without reins), for beauty, agility and perfect obedience to the requirements of their driver, when on exhibition, passing through crowded streets, avoiding vehicles and obstacles of every kind, stand unrivaled by any effort of the kind on record.

AMERICAN HUNTER.

I purchased this horse of the administrators of the estate of the late Jesse Johnson, Esq., of Fairlee, Vt. He was sired by a thorough-bred horse called "Hunter", imported by R. and J. Johnson, of Bradford, Vt.; dam a Sherman Morgan. He is a beautiful dark bay, with black points, 15½ hands high, and weighs 1,150 lbs.; age 12 years last June, and was considered a very wicked and dangerous horse when purchased.

He received his first lesson from me at Gilbertsville, Otsego county, N. Y., May 7th, 1867, but owing to other engagements, he received no more lessons until May 16th

of the same year at Bridgewater, Oneida county, N. Y. I then commenced his instruction, giving him a lesson every day until the 4th of June. I then gave an exhibition at Leonardsville, Madison county, N. Y.; driving him without rein, and turning him loose in the streets as a trick horse, controling him entirely by whip and word of command.

He has been on exhibition ever since that time, and taking into consideration his willful and stubborn disposition, I consider him one of the best and most tractable horses on exhibition.

☞ "On the 3d day of April, 1865, we commenced training a wild and nervous Black Hawk horse for Messrs. Williams & Wilder, who were at that time receiving instructions from us, preparatory to giving instructions themselves. In about six days we delivered them the horse, and on the following week they gave a successful exhibition at Whitingham, Vt. They continued to give successful performances for some months, when, through entire carelessness on the part of the driver, the horse was severely injured by the breaking of a vehicle, and has not since been exhibited. We are informed that each of these gentlemen have a horse which they are driving without reins, broken according to our directions."

I am surprised to see the above fabrication published by Messrs. Rockwell & Hurlbut. Any man who gives his time and energy to the self-sacrificing business of teaching rational horsemanship, should be a man entitled to the respect of an intelligent people; but when, from *jealousy* or malice, he becomes thus reckless of truth and honor, he relinquishes his manhood, and becomes an object of mere disgust and detestation.

We say "God speed" to every man who is laboring to increase the usefulness and value of that noble animal, the Horse.

But to the facts: I had been teaching Horsemanship for several years, successfully, previous to the 3d day of April 1863, and previous to my ever having seen Mr. Rockwell, or to his ever having adopted the profession of horsemanship. The horse, Black Hawk Tiger, was neither trained nor ever driven, nor even *seen* by Mr. Rockwell, either then, previous or subsequent to that time, to my knowledge; but was trained and is still owned by me, and is the same proud-spirited animal, (and driven without reins at my pleasure,) whose reputation excited Mr. Rockwell to issue the above base fabrications.

The "injury" spoken of was occasioned by the breaking of the shafts of the wagon in which he was being driven, in making a short turn, thus freeing himself from the wagon, and for a moment, losing sight of his driver; but, upon the signal, he immediately returned, with the splintered shafts dangling about his legs, and, in doing so, he got a splinter in his foot, and for three weeks was not exhibited; but after that was exhibited daily until my famous horse, MORGAN TIGER, was put upon exhibition.

THE FIRST STEP TO BE TAKEN WITH A WILD COLT.

Get your colt into some enclosure—small barn-yard or barn-floor. This is the colt's first idea of confinement. See that everything is so arranged that it cannot jump over, nor get under; also have the enclosure so arranged that it cannot injure itself by running against anything.

Everything is now ready for the colt to receive its first

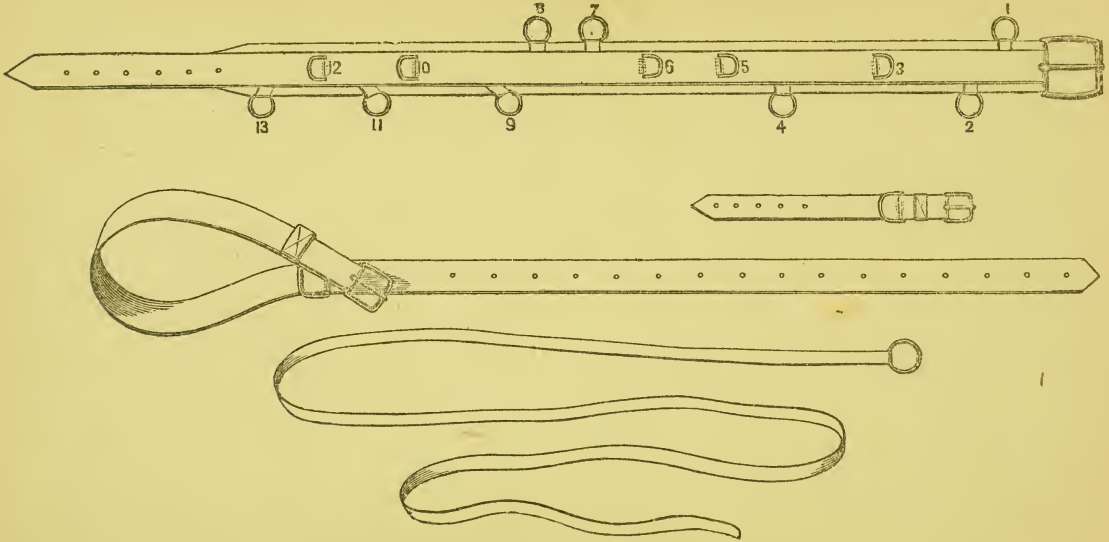
lesson; and how is this to be accomplished? Some individuals, unacquainted with this system, would say that the plan here adopted, would so frighten a wild colt, that it would prove a failure; but it is quite the reverse, for years of experience has taught us to believe that it is natural for all animals on the face of this broad earth, to do whatever will add to their pleasure, and enable them to shun pain. Prepare yourself with a good spring-top whip, step into the enclosure, all is now safe; you alone with your colt, with nothing to attract his attention but yourself. You have your whip in your hand; now remember that the whip is a very good thing in its place, but I am sorry to say that it often gets out of place. Do not use your whip to hurt the colt, but to get his attention.

Stand quietly for a few moments and then give your whip a sharp crack, and he will eye you closely; now gently approach him, looking him fully in the eye; if he attempts to turn to run from you, give him a sharp crack with your whip around the hind legs and under the flank. Never strike him forward of the quarters, and if possible, avoid striking him while he is looking at you. After applying your whip in this way until he will stand quiet with his head towards you, take your whip in your left hand, holding out your right, and gently approach him saying, Ho! boy; but in approaching him, if he should turn and run from you, apply the whip smartly to his hind legs. In a very few moments he does not turn his quarters towards you, but will stand and face you, and allow you to place your hand upon his neck, pat and caress him. In so doing, you gain his confidence, and awaken two qualities of his nature, fear and love; he loves to be with you, and he fears to leave you. When he

comes to you, he comes for protection; if he attempts to leave you he is sure to get into trouble.

In a very few moments he will allow you to handle him, all around his head and neck, and follow you like a pet dog. This exercise was fully illustrated by J. Smith, of Virginia, which is thus described by S. W. Coles.

"A wild and vicious mare was brought to him, which it was said he could not manage unless he dealt with the devil, for she was a wild thorough-bred mare, high tempered, and disposed to kick and bite. She was driven into the barn; he entered and fastened the door. Before she had time to survey him, he was giving her the lash smartly. Around she went, kicking and jumping, no rest, the sweat flowed, and she slackened in her movements. When she approached him he ceased whipping, and held out his hand and said, come along! Again she was off, and the whip was applied. This was repeated several times before she would advance; when she moved towards him, he approached and patted her, and as he moved away and said, come along, she followed; in a moment she darted off, he applied the whip smartly, she stopped, trembled and approached him, he patted her neck and said, come along! and she followed him several times around the barn; when she lagged he was away and the whip applied; after that she would not remain two feet from him. He ordered the door opened, and the mare followed close to him through the crowd and back to the stable." This shows and proves clearly the first step, and the only correct way of forming an acquaintance with wild and vicious horses. But it should be remembered, that your main object is to get the confidence and attention of your horse. You will find some



(Fig. 2.)

that naturally have too much fear of man—others have no fear nor regard for man; therefore you must use your best judgment.

The best advice that I can now give you is, control yourself—gain the confidence of your horse, and never betray it by harsh and brutal treatment.

Your colt is now brought up by the use of the whip, and follows close by your side. The next step is to teach him that his strength, compared with yours, amounts to nothing.

Satisfy him that you can control him as you wish, and that if he will submit he will not be hurt.

This is best accomplished by the use of our surcingle. (See Fig. 2.)

Much has been said of J. S. Rarey's system of subjn-gating horses. It is known almost the world over. He taught his system throughout the United States, Upper and Lower Canada, and has also had the honor of operating before the Royal Court of England; and, as far as our knowledge extends, his system has met with the approval of all those who have attended his lectures.

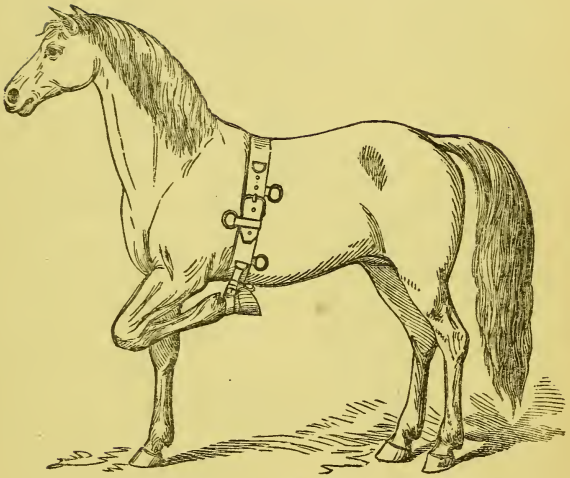
But, after giving him all the praise that is due to him, it must be admitted that horsemanship, like all other sciences, has met with very great improvements. The plan that we adopt is considered far superior to Mr. Rarey's, or any other plan ever introduced; for our theory places the horse in a position, that he is unconscious of the amount of his strength.

Teach and satisfy him that we can control every muscle in his system,—not only his head and neck, but his limbs, and his back. When once satisfied of this fact, he submits himself to our will, and is then, and not till then,

prepared to receive further instruction; for now we have the three points established, fear, love and obedience. Now for the practical use of the surcingle.

After teaching the horse to come to you, take the surcingle in your hand, and approach him at the left side, pat and caress him; carefully lay the surcingle over his back and buckle it as you would over a blanket. Now gently raise the left forward foot, and place it in the surcingle by the use of the strap attached to the third ring of the surcingle, as in Fig. 3.

Your horse is now upon three legs, and it is impossible for him to free himself. He finds that he is fast and in trouble, and as you have taught him to come to you for protection, he instantly comes to you for help. Now as he calls to you for assistance, be ever ready and willing to assist him. By so doing, you awaken his love and gratitude, at the same time destroying his confidence in his own ability. As you approach, gently pat and caress him, and relieve his foot. After caressing him for a short time, step to the other side and place the right foot in the fifth ring of the surcingle, which comes in the same position as the third ring on the left side. He will soon call for help; as soon as he does, pat and caress him. Up to this time you have not attempted to control his head, and why? The main object thus far has been to gain his confidence, and satisfy him that you could control him, and if you should try to control his head he would be very anxious to free himself; and also, in attempting to control his head, you must necessarily inflict pain, and that would tend to destroy confidence in you, for he would be as anxious to free his head from anything that was hurting him, as you would to free your hand from the fire, if a man was hold-



(Fig. 3.)

(Fig. 4.)

ing it there. You now take a common riding bridle and carefully place it upon his head, being very careful not to hurt his mouth nor teeth with the bit; do not pull his ears nor pinch his nose; draw the bit well up to the angle of the mouth.

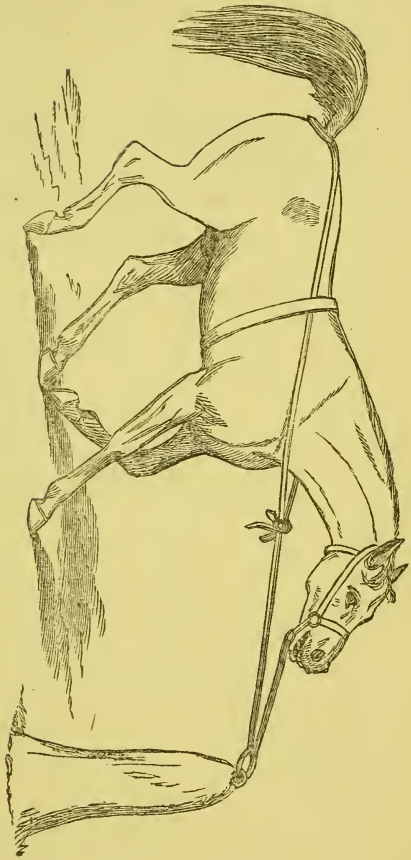
The bridle now being upon his head, let the foot down, and take a single driving rein, and make it fast to the fifth ring of the surcingle; your ten inch strap with ring attached, run on to the rein; now run the long line to the sixth ring, which comes just above the fifth. The fifth and sixth rings are called the pulley rings. By drawing tight upon the long line, you will see that the ten inch strap is drawn to the surcingle. Now run the long line to the ninth ring, which comes near the top of the back, and to the right side of the horse. Run the long line to the bit-ring, on the right side, and lay it over his back to the left side. Now step to the left side, and place the foot to the third ring, take the long line in your right hand, the rein in your left, draw his head a little from you by the use of the line over his back, as shown in Fig. 4., and in about one minute he will lie down upon his left side, with his head fast to the right side, which prevents him from regaining his feet, and also teaches him that you can control his head. He will soon yield his head to you, and allow you to handle it in any way you wish.

When he submits himself to you, lay his head gently to the floor; lay your right leg gently over his back; take the ten inch strap in your right hand and fasten it to the pastern of the right fore foot. Now pass the long line to the seventh ring; you now have both forward feet to surcingle, and his head fast to his side; now take your pole

strap; loop one to the upper or right hind leg; draw it up and make fast to the eighth ring; the lower or left hind leg to the fourth ring. Now all of the legs and head are fast to the surcingle, and as much under your control as though he was screwed in a vice, and he is just in the right position to perform any surgical operation, such as castrating and the like. We never ask over ten minutes to castrate any stallion alone, without the assistance of any one. I claim, after long experience and acquaintance with other methods, that this is the best and only true device in practical use for this purpose.

By handling your horse in this manner, you place him in a position that he is wholly unconscious of his strength, and when you bring him to his feet, he is willing to do almost anything you may require of him without resistance. You now have the three points established, fear, love, and obedience, and a foundation laid for future education. Your colt has learned to follow to the right and left, and straight ahead. By the use of your whip, you have also satisfied him that you can control him. You must now teach him to stand hitched with the halter, and in a way to prevent his ever learning to pull on the halter. (See Fig. 5.)

Lead him into the stall and hitch by this plan, and he is thoroughly halter-broken, without ever being injured about the head. After testing all other methods ever introduced, I find this decidedly preferable to any other; and, *how far preferable* to the old barbarous and inhuman way of snubbing him to a post, and permitting him to pull until nearly or quite dead! And what right has man to inflict so much agony upon any life entrusted to his care? What right has humanity to complain of tyr-



(Fig. 5.)

(Fig. 6.)

anny in its superiors, when the human race can neglect and entail such anguish upon the beings beneath them.

A little self-restraint instilled by a better plan of education; a little more humanity enforced by the teachers of religion, to instruct that man should not view himself as the owner of the earth, which he temporarily inhabits; that man should not consider himself the proprietor of the lives which share the globe with him; that man should be actuated by genuine CHRISTIAN LOVE towards all animated nature; feeling kindly for the lives akin to his own, and acknowledging, as fellow sojourners, the creatures by which he is surrounded; then how much affliction might be eradicated from that which wickedness alone renders a "vale of tears."

BITTING THE COLT.

Here it should be remembered, that the main object is to get an easy, governable mouth; not, as many people suppose, to make a stylish horse for, no matter how stylish your horse may appear, if he has not a governable month, he is not a safe nor a pleasant horse to drive.

Long experience has taught me, that all bad horses in harness have ungovernable mouths, therefore, let your main object be to accomplish the above. And we think the following plan superior to any other. (See Fig. 6.)

THE BITTING BRIDLE.

Take a strap two and one-half feet in length, and one inch wide, with a one and a half inch ring sewed to one end of it; now attach another three inch strap, of the same width, with a buckle. Now, $2\frac{1}{2}$ inches from the ring, inside of the long strap, attach a piece of elastic rubber, seven or

eight inches in length, and to this rubber fasten a small cord, twelve or fifteen feet long, looped through the ring. Now place a common headstall upon your colt's head, with the overdraw-check, leaving the rein quite loose; leave him in the yard or stable for a few moments, then remove it, frequently replacing and allowing it to remain on a short time. By this means his mouth becomes used to the bit, which is much better than the old plan. After he has become a little used to the bridle in this way you can commence bitting or teaching him to come to the bit. Take your bitting bridle, and buckle around the neck, (the same as you would a strap halter around the neck), leaving the ring in the strap to come under the throat; now loop the cord into the mouth and draw up your check-rein as tight as he can comfortably bear; now take your cord in your hand (See Fig. 6.) and lead him about the yard; whenever he attempts to rest upon the bit, give him a light, quick jerk upward with your cord, which will soon teach him to keep his head up. After working in this manner a few times, then step to the right side, a little back of the quarters, and give him a quick jerk to the right, not hard enough to shake him off from his feet, but just enough to bring him around to you; now step to the left side, and repeat as on the right side. In about one hour, by limiting your lessons to five or ten minutes, and repeating until the head is rendered freely and readily to the pressure of the rein, you will have him sufficiently bitted to harness.

HITCHING THE COLT IN THE STALL THE FIRST TIME.

After halter-breaking your colt, it is then necessary to give him a rest before working him farther; and to hitch

him in the stall for the first time, observe the following rule :—Examine your stable very closely, in order to ascertain that there are no loose nor broken planks in the floor, also see that the rack, manger and lining of the stall is sound and all right. All is now in readiness; lead him quietly up to the stall. If he shows any sign of fear, let him stop for a few moments; talk gently; also pat him on the neck. By so doing, you will dispel his fear, and he will quietly pass into the stall. Now for the plan of hitching him. If you should hitch him with the tie-strap, as is generally practiced, some little noise on the scaffold above, (such as the scratching of hens, or the like), would cause him to stare, pull, break loose, and soon he is a confirmed halter-puller. The plan we adopt for hitching the colt the first time is simple and effectual. Procure a piece of rein webbing fifteen feet in length, or a strap one and a fourth inches wide, of the same length.

Get the center of said web or strap; now buckle a common web surcingle around his body, just back of the shoulder, then lay your webbing across his hips, carry one end forward between the surcingle and body on the left side, the opposite end between the surcingle and body on the off side of the colt, the center resting across his hips, the ends carried forward; now take the center of the webbing in your right hand and give it one turn over; that leaves it crossed upon his hips; now carry the center back, and pass his tail through the loop that you made by turning the center of the webbing over—the same as crupping with harness; step forward, reach your left hand through under the colt's neck, and tie them snug around the chest; next carry the end of your tie-strap through the hole or ring in the manger, bring back and

make fast to the webbing that passes around the chest. Your colt is now made fast in the stall by the use of the webbing attached to his tail; you need have no fears of his breaking the halter or injuring himself.

Place him in that position a few times, and there is no danger of his ever breaking a common halter. If you should at any time use a rope in place of webbing, wind the crupper part with a piece of soft cloth, otherwise you would injure his tail. This plan will break the worst of halter-pullers.

HANDLING THE COLT'S FEET.

We consider it the duty of every one that raises a colt, to prepare it for the smith before he takes it to the shop to get it shod, for many valuable colts have been made almost worthless through neglect of this. There are few horses that may not be gradually rendered manageable for this purpose. By mildness and firmness they will soon learn that no harm is meant, and they will not forget their usual habit of obedience; but if the remembrance of corporal punishment is connected with shoeing, they will be more or less fidgety, and sometimes very dangerous. We wish that it was a law in every smith-shop, that no man should be permitted to strike a horse, much less to twitch or gag him without the owner's consent, and that a young horse should never be struck nor twitched. The plan that we adopt to handle the feet is very simple and not less effectual. By adopting this plan your colt can in a few moments be taught to stand perfectly still to be shod. As soon as you get your colt thoroughly broken to the halter, get a strap or a piece of webbing eighteen feet in length; now tie one end of the strap or webbing around the colt's neck, just where

the collar comes; work it well back to the shoulder; you are now standing at the left side of the colt; do not be in a hurry; work handily and carefully; be very uniform in your words and acts; now take the other end of your strap, gently pass it back between the forward legs, bring it through to the left side; now lay it over his back, and, with your right hand under his chest, you can draw it through again to the left side; now place the end up into the loop around the neck. You will now find your strap crossed just back of the left fore-arm; gently raise the left foot, and lay it into the strap that comes between the legs; the outside strap is wound around the ankle. Now take the end that is passed through the loop around the neck in your right hand your left holding the colt by the head; you will see that you have the foot secure, with no possible chance to injure himself in the least, as the whole strain comes over the back and around the neck. Let the colt stand until he attempts to free the foot; but if you hold him firm he will soon find it useless, and give up, and yield his foot to you. The moment that he yields, and not till then, relieve him. You have now fully convinced him that you are not going to hurt him, and that he cannot get his foot from you; you will have no more trouble with that foot. Now try the right foot in the same manner; handle each one thoroughly; remember that it is just as necessary to handle the fore feet as the hind ones, for a horse that is vicious to shoe forward is more dangerous than one that is bad behind. Now handle the hind feet. Have the strap around the neck, and between the fore legs, as before, and carry it back through the hind legs, around the near hind leg below the fetlock, and bring for-

ward through the loop around the neck. Take the colt by the head with your left hand, and the strap in your right; pull back on the strap, which will cause the foot to be drawn forward. This the colt will resist by kicking, but draw tightly on the strap, and hold him firmly by the head; he will soon find resistance useless, and will let you handle it as you wish. Now step to the right side of your colt, and proceed as on the left. Remember that you must be firm, yet kind, and ever willing to submit to him when he does to you, but never let him know his strength compared with your own, and never let him know that he is the strongest. By faithfully pursuing this plan, as explained and demonstrated before the class, I am confident that you will meet with the most favorable results. Remember that you must be particular and persevering.

TO RIDE A COLT.

You have gained the confidence of your colt, by the use of your whip; now be very careful that you do not betray it, for if very wild he will be very suspicious, and watch every move; therefore it is very important that you are uniform in all your acts and words. The old fashioned plan of riding the colt, we think, very wrong. We well remember of attempting to ride a colt under the directions of an old experienced horseman. We were placed upon the colt's back while he was rearing and plunging, and the next moment found ourself standing on our head in the snow, some three rods from the colt, and after making several useless attempts to mount him gave it up as a bad job; while, by adopting our present plan, in a few moments the colt could have been ridden with perfect safety, just where we wished to go, and if this plan is faithfully pursued, we are sure

that any colt can be mounted and rode, in a few moments, without incurring the risk of being pitched upon your head, and teaching your colt a habit that will be dangerous as well as very unpleasant. We say this with great confidence, for during nine years, experience with the wildest colts that could be produced, it has never failed in a single case. Before you attempt to mount a colt it is very important that you teach him the word *whoa*, which we claim to be the most important word in horsemanship; and if you wish your horse to learn and obey the word, he must first learn the meaning of it, and then you must only make use of it when you wish him to stop. Never use the word *whoa* to call your horse's attention, in the stable, as many persons do, such as, "*whoa, get over; whoa, back; whoa, come here,*" etc. until the horse gets completely confused with the word, and cannot comprehend your meaning. Hence the necessity of being uniform in word and act. In fact, if you wish your horse to understand and obey you, you must always be honest with him—never tell him what you do not mean—never deceive him under any circumstances, but gain his confidence, and never betray it. We would just as soon think of betraying the confidence of our brother man as the horse we were training. In teaching your horse the word *whoa*, take a strap six or eight feet in length, lay it across his back to the right side, fasten to the ankle of the right foot, holding the strap in your right hand, the left on the halter or bridle; now lead the colt a few steps and say, *whoa*, at the same time pull on the strap, which will throw him on three legs, and suddenly bring him to a stop, and in a very short time teach him that the word *whoa* means to stop. After educating your colt thoroughly in this manner, then attempt to mount him by placing your knee on

his side, just back of the forward forearm, and draw yourself gradually to his back; if he should attempt to move, pull on the strap, using the word *whoa*, and he will soon think more of his foot than of you, for he cannot think of both at the same time, as it is impossible for a horse to think of two things at once. You must now be very careful; do not try to work fast, and do not be in a hurry, for you will frighten him with your quick, hasty moves. If you will work slowly for five minutes, you will be on his back, and he will show no disposition to dismount you. We feel confident in our success, for we have never failed in mounting the worst that could be brought in half that time. Move slowly and carefully until you get your right leg over his back, and in the same gentle manner get into an upright position. You now have your bridle reins in your left hand, the strap in your right, which is attached to the foot, and if he attempts to make a wrong move the word *whoa*, and a pull at the strap, will make all right. Bear in mind, however, that there is a great difference in the temper and intelligence of colts, some being quick to learn, while others are very stupid. Remember that the more dull and stupid the subject, the more need of patience and perseverance, always bearing in mind that you are a man, and are dealing with a dumb brute—that if you are not capable of controlling yourself, you certainly are not capable of controlling a poor dumb brute. Your colt will now allow you to mount and dismount at pleasure. You cannot expect him to be handy to the rein until after he is properly bitted, which is the next step with the colt.

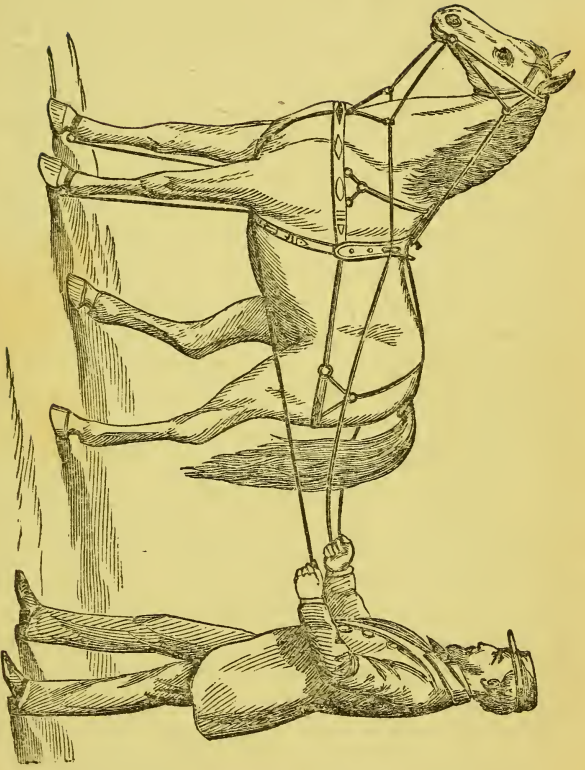
HARNESSING THE COLT FOR THE FIRST TIME.

If the colt is shy about allowing you to put on the harness, upon backing him out of the stall, first put the cord around his neck, with a running loop in his mouth, (same as for bitting), and give him a sharp pull sidewise, at the same time repeat the word whoa; also gently pat him upon the neck. Now lead him to the place on the barn floor where you wish to have him stand while harnessing, and quietly take down your harness from the pegs. If the colt moves from his position, lay down your harness and give him two or three more sharp pulls with the cord, at the same time, with firmness, repeating the word whoa. Do not speak too loud; be careful in pulling him around not to hurt him. A few pulls with the cord, patting and caressing about the neck and face, frequently repeating the word whoa, will so quiet him that you will have no farther trouble. We well know this operation requires a little time and patience. When the harness is well on, take it off and repeat the process, until he will allow you to harness him without scringing. In bridling the colt observe the same rules with cord as for harnessing. With your cord lead him around the yard for half an hour, to acquaint him with the moving of straps and the feeling of harness in his unaccustomed position. If he should attempt to escape, one pull with the cord will bring him to you in a moment. After a little time you may commence driving him with the reins; take the precaution to attach your webbing to the ankles of the left forward foot; bring it back between the girth and body of the colt; hold it in your hand as a third rein. If he should attempt to run, pull upon your webbing; take his left foot from him; that leaves him on three feet, and in your power, at the same time repeating

the word whoa, which brings him to a stop. A lesson of two or three hours each day, for three or four days, turning him in different directions, to stop and go at the word, impressing upon his mind that you are his superior, and can control him at pleasure, and he is ready for hitching in harness the first time.

HITCHING THE COLT TO WAGON THE FIRST TIME.

In hitching the colt to wagon the first time, we think it a far better and safer plan to hitch him in double harness, beside a well broken horse, also on the off side,—and why? The first handling your colt receives has been mostly upon the near side: consequently, he being on the off side, and the broken horse on the near side, where the colt has received his first lesson, he would not be as apt to scringe as he would be to place the broken horse on the off side. Again: should an accident occur, to cause you to jump from your wagon, it would be more natural for you to jump to the near side, and in stopping your team it is more natural to get out on the near side. The harness being on both horses, you will now proceed to hitch them to wagon. In doing this it will be necessary to have some one to assist you; let your assistant lead the broken horse to the near side of the pole; next place your colt at the off side; let the person helping you, hold the colt by the head while you are buckling the reins, hitching the tugs, and placing the webbing, or long line, to the ankle of the left forward foot. Perhaps it would be better to buckle a short strap around the pastern, with ring attached, to guard against chafing. To be more fully understood, we will explain how it is made: take a soft leather strap, one inch and a half wide, and ten inches long, with the inside edges shaved thin;



(Fig. 7.)

then take a strip of firm leather, fifteen inches long and one inch wide; on one end place a buckle and loop, with a lap of two inches on the under side; in the other end punch holes for the buckle tongue, place the inch strap on the outside of the wide strap, in the center, with one end extending one inch beyond the buckle; then stitch the two together, commencing at the buckle, and stitching two inches, having the loop pretty close to the buckle, then slip a one and a half inch ring over the outer strap, close up to the stitching: then proceed with the stitching and close up. This finishes the strap which is to buckle around the ankle of the forward foot. A strap, or webbing, fifteen feet in length, is buckled or tied into the ring, and carried back between the girth and body of the colt, and back into the wagon, holding it with the lines in your hands. See Fig. 7. All is now ready; start up slowly, stopping occasionally, while on a walk, pronouncing the word "whoa," at the same time pulling up on the foot strap. You will at once perceive that you have the most perfect control over the colt's movements. Should he attempt to run, catch his foot and bring him to a stop; don't halloo at the top of your voice, but with firmness say *whoa*. You may think your colt would stumble and fall, but strange as it may appear to you, it is almost impossible when in that position for him to fall, or even stumble, while in motion. The colt being unused to work, it will be necessary to give him a short drive the first time, as you do not want him to get leg-weary and become sullen; after which you can give him short and lively drives, until he becomes waywise, and obeys the rein and word quickly. When he has by this means become accustomed to being handled without scring-

ing, or showing signs of fear, you may then hitch him up single.

HITCHING THE COLT IN SINGLE HARNESS.

Put on your harness, which should be strong in every respect, and well fitted to your colt, carefully; lead him around for a short time, until he becomes familiar with the harness, then check him, quite loosely at first. Take your webbing, or the strap that you have used to handle his feet, attach one end to the ankle of the right forward foot, carrying it back through between the belly-band of your harness and the colt. Now take your reins from the pad, and you have three reins, two to his head and one to his foot. Now drive him about a short time; when you want him to stop, use the word *whoa*, and take his foot. Now place the web or strap between his hind legs, touching him gently on each leg; if he should attempt to jump or kick, say whoa, pull on the foot strap, then gently approach him, pat and caress, to let him know that you are with him, and that he has done right in stopping. Continue this until he will start and stop at the word; come to the right or left, as the reins indicate. He is now prepared for the wagon. Do not be tempted, under any circumstances, to use an old, rotten harness, nor to hitch your colt to an old, rotten, rattling wagon, liable to give way on the first move of the colt. Many valuable colts have been so frightened through such carelessness as to become almost useless.

Make everything safe and sure, as safety and certainty should be your motto.

Before you hitch your colt into the shafts, lead him around the wagon or sleigh, and let him examine every part of it; then back him into the shafts; stand on the left side of your colt; have the strap or webbing attached to

the right fore-foot, and over the back, holding it constantly in your hand; now gently lift the shafts, and make him fast; if he should attempt to move, the word whoa, and the use of the foot strap would quiet him; now step to the right side, take the foot strap, pass one end over the belly-band of the harness, and carry it back on the right side of the wagon, over the hold-back strap, using that as a third rein in your hand. You see now that you are all safe. If he attempts to run, pull upon this strap, which instantly throws him on three legs, therefore he is obliged to stop; if he attempts to run back, the same remedy stops him; if he attempts to kick, call his attention to his forward foot instantly.

Now all that is necessary is to be careful and use a little common sense in teaching your colt what you want him to do; in a very short time you have a colt you can recommend as properly broken, safe and kind for any one to drive, which is almost the first question asked by the purchaser.

I have now taken you through the whole list of training your colt, and I hope you will never lose sight of all the important principles of my system; Patience, Perseverance and Kindness, with a good share of Firmness; and also remember that colts should be *trained* not *broken*. Train a colt in the way he should go, and he will not need breaking. Do not do as many people do, let their colts run until they are four or five years old, and then undertake to break them in the old fashioned way; this is impracticable, for you as often break their constitutions, their courage, their spirits, and sometimes their *necks*, and very often the breakers themselves get hurt. The colt should be taught step by step, with patience and perseverance, what you

wish him to do; not driven to do what he does not know—he cannot understand—while smarting under the lash.

TEACHING A COLT TO BACK.

Teaching the colt to back is the next operation, and is a matter of great importance, as the future value of your colt depends upon his being thoroughly broken. It should be commenced while bitting the colt; and before you ever attempt to harness you should teach him to back promptly at the word, in the following manner. Have on bitting bridle, stand in front and a little to the left of your colt, your left hand on the bridle, in your right a little spring top whip; now give a quick pull on the bridle, at the same moment a light blow on the nose with your whip, and say, "back, sir," ease up on the bridle, your whip at your right side, patting and caressing on the neck with your right hand; in a few moments try it again. By repeating this a few times he will learn what you mean by saying "back, sir."

SUBDUING THE COLT.

The plan for subjugating wild colts and vicious horses has been experimented upon more than all other points in horsemanship. At present there are five different modes of operating, as follows: Mr. J. S. Rarey's plan of strapping the foot; Messrs. Rockwell & Hurlbut's whirling until he staggers or falls to the ground; Messrs. D. Magner & Dudley claim to have an improvement upon the last named by tying a loop in the end of his tail, taking the tie strap of the halter, passing it through the loop, bringing his head to his side, and tying it fast to the tail; he then, with a bow-top whip, steps behind the horse, cracks him sharp in the quarters, and keeps him whirling until he falls. Another

plan as introduced by Prof. Hamilton, is to procure a piece of rein webbing ten feet in length, attach one end to the ankle of the left forward foot, made fast with a timber hitch, which is made thus: take the end of the webbing, carry it to the inside of the pastern, bring it around the ankle to the outside, thence under the main webbing over to the outside and back of the pastern, then pass the end under and up through between the ankle and webbing, passing the end through twice, and slipped up close (a knot tied after that manner cannot slip or injure the pastern, and will also untie without trouble.) After the web is made fast to the pastern of the left forward foot, the other end is carried through under the chest, and over the horse's back to the near side; a half-inch cord is now tied around the horse's neck, about midway between the head and shoulder, a running loop is then passed through between the neck and cord, carried forward and looped into the mouth. He now lifts the left forward foot, takes the webbing that is brought over the back to the near side, draws it close, winds the webbing around his right hand, and presses the knuckles hard on the left side of the back; with the left hand reaches to the off side of the horse's neck, grasps the cord that is looped into the mouth, and carries his head against his right shoulder. After moving him upon three legs for a little time, he then throws him upon the left side. All the above named plans may answer very well, but we never adopt any of them, except with the green colt. In handling a wild colt, if he (at times) becomes stubborn and willful, we grasp the halter with the left hand, with the right grasp the tail, and give him a few sharp whirls to the left, until he is somewhat dizzy; we then slip to the opposite side, with the right hand grasp the nosepiece of the

halter, with the left, the tail, and give him a few sharp turns to the right; if he is rather sullen and refuses to move, with your left boot give him a few kicks across the quarter that will give him a start, after which you can whirl him either way as fast as you like. This will have a good effect upon a wild colt that has acquired no vicious habits; but for the old horse I use my surcingle: study and fully understand its use, and you will not fail to bring them to an unconditional surrender. Read carefully the next point in order, and its use will be fully explained.

DIMENSIONS OF SURCINGLE.

(See Fig. 2)

Length, seven feet; width, two and a half inches, with thirteen rings attached, as follows: The first ring is four inches from the buckle, on the front edge; the second, three inches from the first, on the back edge, slanting from the buckle; the third is a D ring, five inches from the second, the fourth is six inches from the third, on the back edge; which comes directly under the chest; the fifth is a D ring, five inches from the fourth; the sixth is a D ring, four inches from the fifth; the seventh is four inches from the sixth, on the front edge; the eighth is five inches from the seventh, on the front edge; the ninth is three inches from the eighth, on the back edge, slanting towards the buckle; the tenth is a D ring, ten inches from the ninth; the eleventh is five inches from the tenth on the back edge, slanting towards the buckle; the twelfth is a D ring, five inches from the eleventh; the thirteenth is three inches from the twelfth, slanting from the buckle.

CASTRATING.

The plan usually adopted for throwing and castrating the colt has been attended with more or less danger, time and trouble. The operator has prepared a rope about one inch and a half in diameter, and some twenty feet in length. In the centre is made a loop, which is slipped over his head and neck down to the shoulders, the ends carried back and around the ankles of the hind feet. One man is placed on each side of the colt, holding the ends of said rope; the third man at his head. The two men holding the ends of the rope, pull, while the man at his head endeavors to back him. After some severe struggling, he is thrown back upon his haunches. I must say the plan is not only cruel, but attended with a great amount of danger; the colt does not recover from his injuries for some time. Two valuable colts to our certain knowledge, were rendered worthless by the use of the above mentioned step in throwing them; one had his thigh broken, the other was so injured across the loin that he became useless. By the use of the surcingle, as described on a previous page, any boy fifteen years of age can lay down a horse easily, and place him in any position for performing surgical operations of any kind, without the assistance of any one. In sections where I travel in the spring season, colts are sent to me daily to be castrated, and not in a single case, have I occupied more than ten minutes in performing the operation, without any assistance. By the use of the surcingle it can be accomplished in ten minutes (alone), easier than adopt the old fashion way, with half a dozen assistants.

HOW TO DRIVE A KICKING HORSE.

I will now commence with the old bad horse's harness trick. I have very often remarked that ninety-nine out of every hundred vicious horses in harness, are horses with ungovernable mouths. If we govern the mouth, we shall in almost every instance, have a controllable horse. I will ask, did the reader ever see a balky, kicking, bolting, plunging, runaway horse, with a fine, easy, governable mouth? I never have; therefore I always give the vicious horse a thorough training with the bitting cord before hitching up; in a short time he will learn to yield the mouth readily to the pressure of the bit, after he has been thoroughly trained with the cord. I wish to convince him beyond a question, that I have the power to handle him just as I wish, and will just say that I consider it necessary to handle all horses in a manner to convince them that they can be controlled: let your lessons be thorough, but not very long; be gentle and patient with the colt, but make the old, stubborn and vicious horse feel the extent of your power until he submits; then repeat until he yields unconditional submission; then be gentle and kind, yet firm in your treatment afterwards.

After testing all other plans that have been brought before the public, I must say that my present system for handling a vicious horse, to subdue him, or for performing surgical operations, is far ahead of anything ever made public; and if I had retired from the business of teaching Horsemanship, I would not be deprived of the use of this one point for ten times its cost. The first step in the management of a bad horse, is to show him that his willfulness

(Fig. 8.)

must yield to superior power. This you can do best with the use of my surcingle.

It must be remembered this is a vice foremost in point of danger. A vicious kicking horse is more dangerous than one possessing any other vice. If your horse is a little nervous, lay him down with your surcingle, and gently harness him as though he were ever so kind. Then put on the Eureka Safety Bridle, as demonstrated before the class. Your horse is in just the right position. Have no fear, for you can drive any kicking or runaway horse with it anywhere you please. If he attempts to raise his quarters, he throws his head violently into the air, and can do no harm; it has a peculiar advantage over him, for it does not hinder the traveling, as there is nothing attached to his feet, and all you have to attend to is your lines. Drive him in that manner for a few days, after which remove it, and your horse is effectually broken of the vice. (See Fig. 8;)

HOW TO HANDLE A KICKING HORSE IN DOUBLE HARNESS.

In handling a kicking horse in double harness you can virtually adopt the same plan as recommended in single harness. Hitch him to pole by the side of a well broken horse; procure a heavy wagon shaft, with a bow at the butt, the same as for a carriage. Step to the side of your horse, pass the small end through the tug-strap (as in single harness) turning it sidewise, then carry the point of the crooked end under the end of the evener, leaving a lap of some four inches, and make fast with two half-inch bolts, bend projecting outward, after which procure a strap four and a half or five feet long (according to size

of horses), one inch and a half wide, with billet buckle and loop attached to each end, the same as your reins are buckled into the ring of the bits. One end of this strap is buckled around the false shaft, where it passes through the tug-strap of the harness of the kicking horse; the other end is passed through and under the chest of each horse, just back of the forward legs, and buckled into the outside tug-buckle of the opposite horse. That is to prevent the shaft from rising when the horse attempts to kick. Now place your bridle upon the horse's head, as recommended in single harness; bring the ends back, and pass them through the ring made fast on the top of the hips; on one side bring one of the cords down across the hip, and make it fast to the pole; the other end over the hip and make fast to the false shaft. He is now in almost the same position as when between the single shafts.

The strap under the chest prevents the shaft from rising, should he attempt to kick—also the horses from spreading. I have another plan of working a kicking horse in double harness, and why I do not recommend it in all cases is because the operator is apt to get careless, and neglect to watch closely the moves of the horse. The operator can always tell, by watching him closely, when he is premeditating a vicious move: a little scringing, dropping of the ear, frisking of the tail, hogging down on the bit with a sudden start, all indicate something wrong. Consequently, you see it is highly necessary to watch his moves closely. The plan we were about to speak of is as follows: and our experience in handling horses warrants us in recommending it as a good one: Hitch your kicker by the side of a well broken horse, procure a strong half inch cord fifteen or eighteen feet in length, pass it

around the horse's neck, get the size, tie your bowline knot, and slip it over the head well down toward the shoulder; then take hold of the cord below, pass it through the loop, between the neck and cord, and place the running loop into his mouth, just as for bitting; then attach the long foot strap to the ankle of the inside forward foot, carry the other end back between the girth and body, into the wagon; also your cord. Get some friend to ride with you the first time, he driving the team, you handling the cord and foot strap. If the horse attemps to kick, take his foot from him—give him a sudden pull with the cord. We have broken some of the worst kind in a very few days by adopting this plan. You have a powerful controlling influence over them, as they can neither run nor kick. Try it.

HOW TO USE A BALKY HORSE.

If ever we felt that the horse deserved the philanthropic sympathy of man, it has been when we have seen a man, ignorant and brutal in his own nature, trying to move a balky horse. We shall have been amply repaid, and shall have certainly given every one who buys this book a rich equivalent for his money, if you are led to a more civilized mode of treatment by its perusal. We are to remember that balking is an acquired habit, and not from any disinclination on his part to pull. We know that some men will take the very best pulling horse, and in a short time make him balky, simply from mis-management. It is not the dull, indolent horse which balks, but the high-spirited and fiery horse of blood and mettle; this is so, because those who undertake to drive them do not understand them. Notice which horse of a team it is that balks, and you will find it to be the one of the highest mettle. He hears the command to go, and, being more ready to obey than the other,

he springs off; but not being able to start the wagon, he is thrown back on his haunches, stopping the other as well as himself. The driver whoops and snaps his whip, and by the time the slower horse has started, the free horse has made another effort, failed, and now both are balked. Both horses recognize that something is wrong, and neither knows what. They are alike afraid to move. Then the driver plies the whip, whoops and slaps the lines, all of which only tends to make the matter worse. This has been seen by almost every person. The horse was willing to go, but did not know how to move the load; and we ask any sensible man to tell us if the horse should be beaten for not doing that which he did not know how to do? You can make a horse do almost anything which he can fully understand; and we do contend that, by proper education any balking horse can be started in a few minutes. Some have adopted the plan of buckling a strap to the ankle of one forward foot, standing in front, and pulling the foot forward, so that the collar presses against his shoulder, and thus causing him to move. Others have adopted the plan of throwing a handful of sand in his eyes, but to this plan, though it succeeds, we are bitterly opposed. We would sooner own a balky than a blind horse.

If you get hold of a horse that has been long in the habit of balking, just set apart a day for his education. Go into some pasture or field, hitch your horse to a light load, which he can move easily. If he refuses to pull, get a half inch cord ten feet in length, tie it around his neck and loop it forward into his mouth. Step to one side, give him a sudden pull and he will move a step towards you. Step to the opposite side and give him another sudden pull; by repeating this ten or twelve times he will start wil-

lingly. Then increase your load, and if he refuses to pull use the cord as above. We have seen the worst of balky horses in three hours time made perfectly kind—to pull in any spot or place. The plan is simple. And why is it so effectual? there is nothing you can place in a horse's mouth by which you can control him with such ease. The cord is placed around his neck, and brought forward into his mouth, and by a sudden pull with the other end it is drawn suddenly across his tongue, comes in contact with the nerve of his lower jaw, which he cannot long endure, and he willingly moves off. If, at any future time, he should show any symptoms of balking, a lesson with the cord is all that is necessary.

HARD PULLERS.

(See Fig. 9.)

It is often remarked, and by horsemen, too, if you have a hard puller upon the bit, give him all the road he wants, and let him go. If he goes too fast jerk him up, first with one line, then with the other. I have known some hard pullers, which, by giving them the rein and all the road they wanted, would run until they would fall, and repeat the same thing day after day. The idea is perfectly absurd; it will amount to nothing but a broken down constitution, Let me speak of a simple plan by which you can control such horses at pleasure. Get a common snaffle bit, around which weld two iron rings one and a half inches in diameter; the bit is now placed in the horse's mouth, with rings slipped close to the cheek bars; get a half inch strap, ten inches in length, with billet buckle and loop attached to each end the same as for buckling check-reins in bits; now place it across the horse's nose, and buckle each end into the rings

(Fig. 9.)

that are welded around the bit. That brings the rings very close each side of the upper jaw; stitch to the center of the strap across the nose one end of another half inch strap eighteen inches long; to the other end attach the buckle on the top of the bridle, and between the ears. This is to keep the nose piece from dropping over the nostril. The bit is now arranged. Place your horse between your shafts; buckle your reins and start him along. Drive him with a slack rein as long as he is quiet; if he attempts to go very fast, pull upon the lines. As you pull, the rings around the bit crowd with more force against the sides of the face, throwing his mouth wide open, and causing the most excruciating pain. Drive him a few days with a bit so arranged, and after that any boy twelve years of age can drive him with perfect ease.

TONGUE OVER THE BIT.

Attach to your bridle a check bit, as follows: procure a small steel bar bit, a small one, so that the check bars will sit close to each side of the horse's face. To this bit, buckle checks and check pieces of bridle; through this bit, drill two holes, leaving a space between, and in the centre, of two inches and a half; get a thick piece of harness leather six inches long; cut it in the form of a diamond, two and a half inches wide, with ends rounded off to a point. The centre of this piece of leather is doubled over the bit, with edges just covering the two holes; it is now stitched together across, and close to the bit; the edges of the points are also stitched firmly together, and as the bit is placed in the mouth, the rounded points of the leather run back

into the horse's mouth and top of the tongue. He is now checked up and the bit kept snug in his mouth; your reins are not to be buckled to this check-bit, but another is used for driving. Get a common snaffle-bit. This is made fast to the check-pieces of the bridle with a couple of small, half-inch straps, five inches long, with buckle and loop attached, letting it hang in the mouth, one inch below the check bit; to this attach your reins. You now have a driving as well as a check bit. If the horse attempts to work his tongue over the bit, the piece of leather so attached will prevent him at once. Should he (as is seldom the case) carry his tongue under the bit and out of the mouth, to the holes drilled through the bit, attach a piece of large wire, passing the ends through; let the center drop one-half inch below, same as a wide wire staple. When you put the bit in his mouth, pull his tongue through the loop, seeing that the space is large enough for it to sit easy. These plans will soon break a horse of this bad habit.

A RUNAWAY, BOLTING, OR PLUNGING HORSE.

This is a very dangerous vice, one accompanied with a great amount of danger to limb and life. If the horse, when making an effort to run, becomes very wild and desperate, and in bolting would jump off some bridge or precipice, it is highly necessary to have some means of controlling him, and to bring him to a sudden stop. To accomplish this, use the cord with small loop placed around the under jaw of the horse; the other end is carried over his neck, brought back, and passed through the small loop attached to the under jaw, and thence

back into the wagon. The running loop, over the horse's neck, should be kept well back to his shoulder. Now prepare two long foot straps, and attach the end with short straps to the ankle of each forward foot. The other ends pass through between the girth and body of the horse, outside of the traces and into the wagon. Hold your long foot straps and cord in your hand with the reins, then drive him along in places where he would be most apt to scare. If he attempts to run or bolt, give him a strong pull with the cord, at the same time saying (with firmness) "what are you doing, sir? go 'long." That may cause him to straighten up, and perhaps give him a sudden start; if so, give him another pull, and say, "carefully, sir!" If the second pull does not check his speed, and you think he may get the best of you, then is the time to pull on the foot straps; take his feet from him, and drop him to his knees, pronouncing the word, "whoa." That brings him to a stop without any failure. Now ease up on your foot straps; do not hold him by the feet after dropping him to his knees, for in so doing he would be likely to struggle, fall over, and perhaps break your shafts. Again start him; if he attempts the same move, take his feet and bring him to a stop. He will not attempt the same move but a few times. There is nothing that will so frighten a horse, as to think he is going to be pitched on his head. The plan will effectually conquer and subdue that willful disposition. After driving him a few times with both webs, you may then feel safe to drive him with one. Every few days repeat the lesson with cord, and one long foot strap; a lesson each day for a few days, will produce the desired result. The same plan is adopted with colts that are in the habit

of running, and kicking at dogs, hogs, pieces of paper flying in the street, and the like. They are constantly on the lookout for such objects, and the driver or owner is never safe. Place the cord as recommended above, into the mouth, and the webbing to the foot, or both if necessary; for my experience in handling horses has convinced me that some horses have the strength and will to run a fourth of a mile on three feet. That is the reason why (in some cases) I use the long strap attached to both feet. In that case you disconcert them at once. If the colt is very headstrong, when frightened, place the webbing to both forward feet, and the cord in the mouth. Also with open bridle, so he can see all around him. Take a dog into the wagon with you. As you are driving quietly along, toss the dog out on the same side you are driving your colt, If he attempts to kick and run, give him a sudden pull with the cord, at the same time take his feet from him saying, *whoa.* Get out, pat and caress him, then repeat it again. A few lessons will break him. Drive him with the Eureka Safety Bridle.

DRIVING ONE REIN.

Even the angles of the mouth with the bitting cord, then keep the blinders up so that he cannot see the driver, for this is often the cause—he is often watching back with one eye, and carrying his head to that side, constantly pulling upon the opposite rein. Oftentimes it is caused by the grinders being sharp; in such cases, file them off.

HOW TO BREAK A HALTER PULLER.

Always use a leather halter, and be sure to have it made so that it will not draw tight around the nose; if he pulls on it, it should be of the right size to fit his head easily and nicely, so that the nose band will not be too tight nor too low. Never put a rope halter on an unbroken colt, or a horse that is in the habit of pulling at the halter under any circumstances whatever. They have caused more horses to hurt or kill themselves than would pay for twice the cost of all the leather halters that ever were needed for the purpose of haltering colts. It is almost impossible to break a horse of the vice with a rope halter. He will pull, rear and throw himself, and thus endanger his life. And we will tell you why. It is just as natural for a horse to try to get his head out of anything that hurts it, or feels unpleasant, as it would be for you to try to get your hand out of a fire. The cords of the rope are hard and cutting; this makes him raise his head, and draw on it; and as soon as he pulls, the slip-noose (the way the rope halters are always made) tightens and pinches his nose, and then he will struggle for life. Who would run the risk of a fine horse's breaking his neck rather than pay the price of a leather halter? If you have a horse that, from mismanagement, has acquired the habit of pulling at the halter, place your leather halter on his head; have the strap you hitch him with twenty feet in length. You may hitch him in a stall, or to a post outside, or in any place where he is in the habit of pulling. If in a stall, run the end of your rein through the hole in the manger, then back through the ring of the halter; and as you pull it through the ring bring his head within two feet of the manger, then

between his forward legs, and make fast to the ankle of his left fore foot. We think you can see clearly there is no possible chance for him to break his halter, nor to get loose. If he makes an attempt to pull back he brings his left hind foot forward under the body, is fearful he will fall, and steps forward in a moment. After he has made the attempt to break his halter three or four times, you may take any object, however frightful, and hold it in a position to frighten him, and he will not make an effort to pull back. We have seen the worst of the kind effectually broken of the vice in thirty minutes.

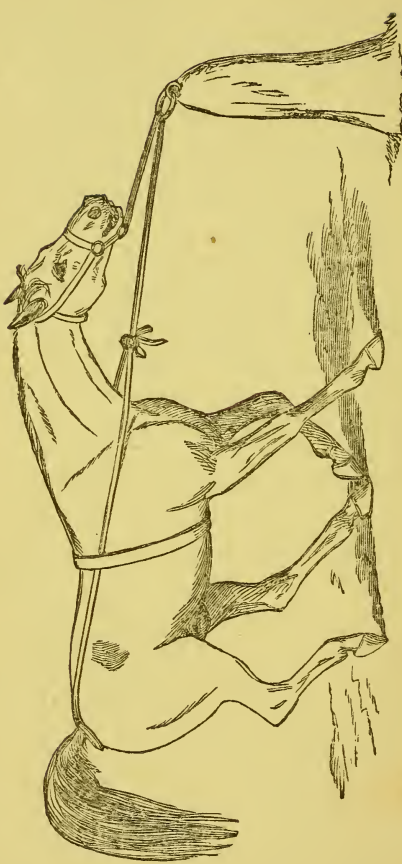
ANOTHER AND BETTER PLAN FOR BREAKING A HALTER-PULLER.

Lead your horse to a place most convenient for hitching him. It don't matter whether to a post, in the stall, or elsewhere. Place a common strap halter upon his head, then procure a piece of rein webbing fifteen feet in length, or a strap one and a fourth inches wide, of the same length; get the centre of said webbing or strap. Now buckle a common web surcingle around his body, just back of the shoulder, then lay your webbing across his hips, carry one end forward between the surcingle and body, on the left side, the opposite end between the surcingle and body, on the off side of the colt the center rests across his hips, the ends carried forward. Take the centre of the webbing in your right hand, give it one turn over, which leaves it crossed upon his hips: carry the centre and pass his tail through the loop you made by turning the centre of the webbing over, the same as cruppering with harness. Step forward, reach your left hand through under the horse's neck, take hold of the end of the webbing on the off side; with your

right hand take the end on the left side, bring the two ends together under the neck, and tie them around the chest. Then carry the end of your tie strap through the ring in the manger, or some point where he has been in the habit of pulling; bring back and make fast to the webing that passes around the chest. Your halter-puller is now in the right position; if he refuses to pull, induce him to do so by frightening him in some manner. My experience with halter-pullers warrants me in saying this plan is lasting and effectual. You can hitch him in the stall and let him remain in that position through the night. He can lie down, get up, and move around the stall without injuring himself in any way. Hitch him each day at different points where he has been in the habit of pulling, after which you need have no fears of his breaking a common halter. (See Fig. 10.)

GETTING CAST IN THE STALL.

If there is anything that will vex and irritate the proprietor of a stable, it is to have some one of his horses getting cast in the stall. Every night a thundering noise is heard and some one calls out, "you have a horse cast." Up he gets, hurries to the stable, and with a great deal of hard labor they finally succeed in getting the horse to his feet, stiff, and badly galled. Observe the following, and you will have no such trouble. Place on your horse a five ring strap halter; (a five ring halter he cannot slip) where the strap comes over the head, just back of the ears, attach a one and a-half inch ring; do not slip the top piece through the ring; you must make it fast, so it will not slip to the right nor to the left; get a strap four inches long, one inch and a quarter wide; set your ring in



(Fig. 10.)

the center of the strap that comes over the top of his head; then run the four inch strap through the ring, stitching both ends, leaving the ring fast in the centre; with the tie strap of your halter make fast to the ring of the manger, leaving sufficient length to put his nose within one foot of the floor. Over his head, and in the floor above, attach a staple and ring; then put his nose within one foot of the floor, and get the distance from the ring in the top of the halter to the ring in the staple above, about a foot back from the manger. The horse has the liberty to lie down, but cannot lay his head sidewise; consequently he cannot get cast. The above never fails.

PAWING IN THE STALL.

Get a common trace chain, about two feet long; fasten it to the leg that he paws with, just above the knee, with a hame strap, and let the chain swing to the side of the leg. He will soon be glad to keep it still.

KICKING IN THE STALL.

Some horses acquire this vice from mere irritability, and uneasiness in the stall. If the horse kicks with but one foot he can be broken, very easily, by attaching a wooden clog to the ankle of the foot that he kicks with. If with both feet, take the saddle part of the harness, and buckle on tightly; then take a short strap, with a ring, and buckle around the forward foot, below the fetlock. To this strap attach another strap; bring up, and pass through the turrets down to the hind foot, below the fetlock. With this attachment on each side, the moment that he kicks he will pull his forward feet from under him, which brings him to his knees, and he will be careful not to do so very often. Let him stand in the stall in this way until he gives up the foolish habit.

VICIOUS BITERS.

If he is a stallion, with the confirmed habit of biting and striking, at your approach, we can give you but little encouragement. We would not think it worth while to attempt to break him, but would advise you to castrate him at once. However, we have bought several bad biting stallions, and effectually cured them of the vice while in our possession; but, on the approach of a stranger, they would show more or less viciousness. I have known owners of such horses to whip them until they would tremble in every joint, and were (seemingly) almost ready to drop, but have never, in a single case, known them cured by such treatment. In twenty minutes he is as determined as ever to renew the combat; he seems unable to resist the temptation; I sometimes think it a species of insanity. If you have a mare or a gelding in possession of this vice, you can easily cure it. Place the small loop of the cord round the under jaw, with running loop over the neck; have the small loop fit so close around the jaw that it cannot spit it out, also under the tongue; the other end carry out of the stall, and hang on the peg where you hang your harness. Now, as you step up to the stall, take hold of the cord with one hand, the other, place on his quarter, and say, "stand over"; if he attempts to frisk or bite at you, give him a sudden pull, and say, "take care, sir!" then pass into the stall; if he again attempts to bite at you, give him another sharp pull, saying, "what are you doing sir!" Give him a few lessons of this kind, and a cure is preformed.

TO SHOE A HORSE THAT IS VICIOUS.

We care not how vicious a horse may be when he is being shod. We think we can make the worst of the kind stand

perfectly still in ten minutes, so that the smith will have no furthur trouble. The plan which is adopted by the smiths in general is not only cruel, but has a tendency to make them far worse. A colt is taken to the shop, wild and uneducated; and, during the process of setting the shoes, if he makes a wrong move, the smith gets in a fearful rage and gives him a sharp blow with the hammer or rasp; the horse rears and plunges and is so frightened he will not allow a hand laid upon him. The next move is to fetter or cast him. A rope is put round his neck, then to the ankle of each of his hind feet, then forward, with perhaps two men at each end. They then pull on the rope, and the horse is thrown back upon his haunches. We have seen fine horses so injured across the loins by adopting this plan of throwing them, that they were never again fit for use.

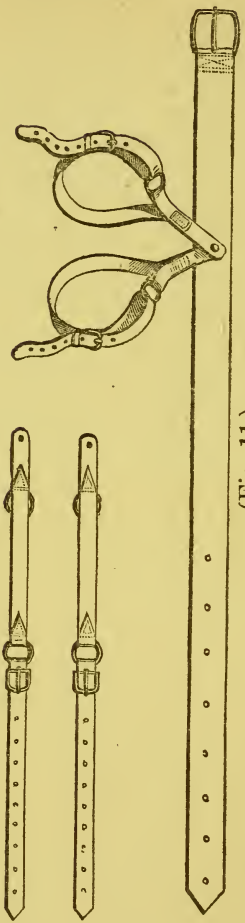
Another plan is to put a pair of tongs on his nose, then a rope to the ankle of one of his hind feet, and through a ring made fast to his tail; his foot is drawn back, and made fast to the side of the shop.

Now we ask any man if there is any common sense in employing such means by which to shoe a wild horse. If a horse struggles, which he is sure to do, he must get badly injured.

By the use of the surcingle you can shoe any horse with ease and safety.

THE PLAN FOR A BREACHY HORSE.

A breachy horse is one which costs a farmer a great amount of time and trouble. He goes to the pasture or field, but is never sure of finding him where he perhaps left him the evening previous. Mr. Cole's plan, by

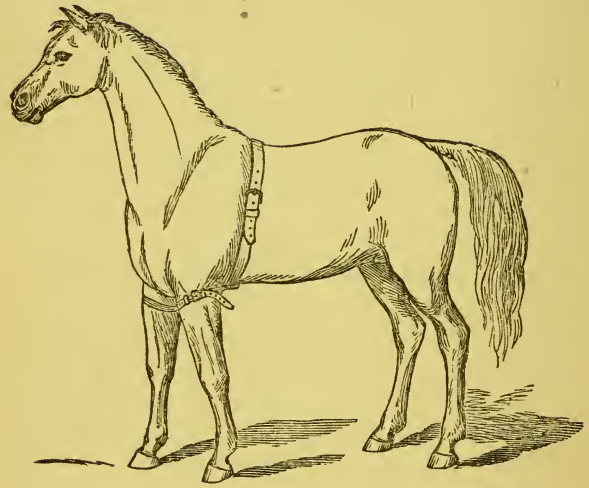


(Fig. 11.)

which to prevent a horse from jumping, is to place a leather surcingle tight around his body, with an inch ring under the chest, fastened to the surcingle; also, a strap one inch wide, eight inches in length, buckled around the ankle of the left hind foot, with a ring attached; a strap one inch wide, three and a half or four feet in length, (the length of this strap being governed by the size of the horse), one end buckled in the ring under the chest, the other end to the ring attached to the ankle. If the horse should attempt to jump, placed in such a position, he deprives himself of the use of the left hind foot, has not power in the right, sufficient to rise—consequently he must fail in his attempt. In most cases the plan proves quite effectual, but we recommend the animal Fetter. (See Fig. 11.)

HOW TO CATCH A HORSE IN PASTURE.

The prevailing opinion of horsemen generally is, that the sense of smell is the governing sense of the horse, and that no means can be employed by which to catch a wild hores, in pasture, without the use of strong smelling oils. Sullivan and Faucher, as well as others, have got up receipts of strong smelling oils, to catch and tame a wild horse—sometimes using the castor of his leg, which they dry, grind into a powder, and blow into his nostril; sometimes using the oil of rhodium, cummin and organum, that are noted for their strong smell; and sometimes they scent the hands with the sweat from under their arms, and blow their breath into his nostrils; all of which, as far as the scent goes, have no effect whatever in gentling or subduing the horse, or conveying any idea to his mind, though the work that accompanies these



Animal Fetter.

efforts—handling him, touching him about the nose and head, and patting him, as they direct you should, after administering the article, will have a very great effect, which they mistake for the effect of the ingredients used. By using the oils you can approach a wild horse in pasture, and after caressing him for a length of time, get your halter on his head, but when you attempt to lead him, he is off as wild as ever.

Faucher, in his work entitled "The Arabian Art of Taming Horses," Page 17, tells us how to accustom a horse to a robe by administering certain articles to his nose, and goes on to say, that these articles must first be applied to the horse's nose before you attempt to break him, in order to operate successfully. Now, reader, can you or any one else, give one single reason why scent can convey any idea to the horse's mind of what we want him to do? If not, then of course strong scents of any kind are of no account in taming the unbroken horse; for everything we get him to do of his own accord, without force, must be accomplished by some means of conveying our idea to his mind. I say to my horse "Go along," and he goes; "whoa" and he stops, because these two words—of which he has learned the meaning by the tap of the whip, and the pull of the rein that first accompanied them—convey the two ideas to his mind of go and stop. Faucher, nor any one else, can ever teach the horse a single thing by the means of scents alone. How long do you suppose a horse would have to stand and smell of a bottle of oil before he would learn to bend the knee, and make a bow at bidding, go yonder and bring your hat, or come here and lie down?

Thus you see the absurdity of trying to break, or tame

the horse by the means of receipts for articles to smell of, or medicines to give him, of any kind whatever. The only science which has ever existed in the world relative to breaking horses, that has been of any account, is that true method which takes them in their natural state of mind, and improves their intelligence. Consequently, if you wish to educate your horse in a proper manner adopt a mechanical process. He will then fully comprehend your meaning and obey at the word. If your horse is wild, and will not be caught when in pasture, drive him into the barn and close the doors, and make them fast, after which adopt Mr. Smith's plan on fifth and sixth pages. It will bring him up to you, and he will follow you just where you wish to go; after which you can go to the pasture or field and say, "Come here, boy," and he obeys the call at once, and gives you no further trouble.

TEACHING TRICKS.

As many of my scholars may wish to know how to teach their horses tricks, I will explain how it may be done. Teaching a young horse a few tricks greatly serves to keep up an interest in him, and make him appear intelligent, fearless and affectionate. In teaching your horse to perform tricks, it is best to give him one or two lessons of half or three-quarters of an hour each, daily.

TO COME AT THE CRACK OF THE WHIP, OR AT THE WORD OF COMMAND,

(Use the same methods as for halter-breaking, catching in pasture, and the like).

TO MAKE A BOW.

Take a pin in your right hand, between the thumb and forefinger, and stand before, but a little to the left of your horse. Then prick him in the breast very lightly, as if a fly was biting; to relieve which he will bring down his head, which you will accept as *yes*, and for which you will reward him by caressing and feeding him a little apple, or a few kernels of corn or oats. Then repeat, and so continue, until he brings the head down the moment he sees the least motion of your hand towards his breast—or substitute some signal which he will understand as readily.

TO SAY NO.

Stand by your horse, near the shoulder, holding the same pin in your hand, with which prick lightly on the withers, and, to relieve himself, he will shake his head.

You then caress him as before, and so continue doing until he will shake his head at the least indication of your touching him with the pin. You can train your horse so nicely in this way in a short time, as to cause him to shake his head, or to bow, by merely turning the hand a little, or moving it slightly towards him.

TO LIE DOWN.

To teach a horse how to do this trick quickly, you must lay him down two or three times, or as often as you may find it necessary to make him understand your object. If an old horse, strap the near fore-leg up to the arm: then take your little strap, previously used to tamper your colt with, and place it over the back and strap around the off fore foot, below the fetlock. Then take the bridle rein firmly in your left hand, about eighteen inches from the head, and pull upon it a little towards you. The moment he steps, pull upon the strap over the body, which will bring the horse to his knees. Hold him quietly, at the same time talking to him gently. When he springs, pull sharply with the left hand, and at the same instant pull down with the right, which will swing him around you, and prevent his rising high enough to injure his knees by the momentum of the body in coming down. By your being gentle, the horse will usually lie down in a short time. When down, treat him with the greatest attention and kindness.

After holding him down ten or fifteen minutes, permit him to get up. Repeat this lesson until he will come down readily. Then use only the strap over the back, which have on the near foot, and bring him on his knees gently, when he will soon lie down. When he will come

on his knees readily by taking up the foot in this way, take up the foot with the hand, asking him to lie down. He will soon come down. When he will come on his knees readily by taking up the foot with the hand, simply stoop as if intending to take it up, saying, "lie down, sir," Then make him come down by a motion of the hand, and finally by telling him to lie down. If a colt, use but a single strap over the body at first, which will cause him to come on his knees. In teaching a horse to lie down—be gentle, caress, and reward him for it, and he, comprehending what you want, and finding himself paid for compliance, will soon be as anxious to get down for the reward as you are to have him.

TO SIT UP.

When your horse will lie down readily, you can then easily teach him to sit up like a dog. If young and not very heavy and strong, you can easily prevent his getting up, without tying down. First cause him to lie down, having on him a common bridle, with the reins over the neck, then step behind him and place the right foot firmly upon the tail, the reins in your hands. Then say, "get up, sir." The horse, rising from a recumbent position, first upon his belly, throws out his forward feet and raising himself upon them, springs forward, and rises on his hind feet Now, standing upon his tail firmly, and pulling back upon the reins when he attempts to spring forward and up, will prevent his doing so, and you hold him sitting up. Hold him firmly a few seconds, talking to him kindly, before permitting him to rise on his feet. Repeat a few times, when, instead of springing up, he will sit on his

haunches a short time, which you are to accept as complying with your wishes. Always say, "sit up, sir," every time, and hold him in the position as long as he will bear, by fondling him, and feeding him from the hand with something he likes and your horse will learn to sit up for you as long as you please.

But if your horse is heavy, and strong, it will be necessary to resort to other means to hold him down at first. This you do by putting on his neck a common collar, and causing him to lie down. Then fasten a piece of rope, or a rein, to each hind foot, and bring forward through the collar and draw up close, which will bring the hind feet well forward. Then step behind, as before, and when he attempts to rise on his hind feet he finds it impossible to do so, because you hold them firmly with these straps. Repeat two or three times, when it will not be necessary to resort to such force.

TO TEACH A HORSE TO KISS YOU.

Teach him, first, to take an apple out of your hand. Then gradually raise the hand nearer the mouth at each repetition, until you require him to take it from your mouth, holding it with the hand, telling him at the same time to kiss you. He will soon learn to reach up his nose to your mouth; first to get his apple, but finally because commanded to do so. Simply repeat until your horse understands the trick thoroughly.

TO SHAKE HANDS.

Tie a short strap, or piece of cord, to the forward foot below the fetlock. Stand directly before the horse, holding the end of this strap or cord in your hand and then say,

"shake hands, sir," and immediately after commanding him to do so, pull upon the strap, which will bring his foot forward, and which you are to accept as shaking hands, thanking him for it by caressing and feeding. And so repeat, until when you make the demand he will bring the foot forward, in anticipation of having it pulled up. This is a very easy trick to teach a horse. By a little practice a horse may be easily trained to approach, make a bow, shake hands, follow like a dog, lie down, sit up, and the like—which feats make him appear both polite and intelligent.

Never lose courage, nor confidence in your ability, because you may not bring about good results easily. To accomplish anything of importance, remember, requires no ordinary resolution and perseverance. There would be no credit nor importance attached to mastering and managing bad horses, if it were not difficult, and apparently dangerous. No duty requires more firmness of purpose in the control of the passions, nor more fidelity to the principles of firmness and truth, than that of horsemanship.

If you would really be a successful horseman, you must never seem, by your conduct, to forget that you are a man, and that your real superiority over the animal consists in the prudent exercise of your reasoning powers. Brute force is not your forte, and the instant you give way to passion your reason must yield to the control of blind instinct, and you at once abdicate your intellectual superiority over the animals. Try to prove, by the example of your action in the performance of the duty, that to be a good horseman requires higher qualifications of fitness than that of the huckstering dishonesty and depravity, so generally evinced in the conduct of those claiming the distinction.

HOW TO TELL A HORSE'S AGE.

At two years old, a colt sheds two centre nippers.

At three years old, a colt sheds the adjoining teeth.

At four years old, a colt sheds the outer or corner teeth.

At five years old, the bridle tooth is up, and at six years, cups leave two centre teeth below.

At seven years old, cups leave adjoining teeth.

At eight years old, cups leave outer or corner teeth.

At nine years old, cups leave the two centre nippers above.

At ten years old, cups leave adjoining teeth.

At eleven years old, cups leave corner upper teeth.

At twelve years old or past, groove on inside of bridle tooth disappears in horses. Mares very seldom have them; when they do they are no criterion to be guided by.

JOCKEY TRICKS.

How to Make a Horse Appear as if he was badly Foundered.—Take a fine wire and fasten tight around ankle, between foot and pastern, and smooth the hair over it. In twenty minutes the horse will show lame. Do not leave it on over nine hours.

To Make a Horse Lame.—Take a single hair from the tail, put through the eye of a needle, lift front fore leg and press the skin between outer and middle tendon or cord; shove the needle through, cut the hair off on each side, and let the foot down; the horse will go lame in twenty minutes.

How to Make a Horse Stand by his Food and not take it.—Grease the front teeth, and the roof of the mouth, with common beef tallow, and he will not eat till

you wash it out. This, in connection with the above, will consummate a perfect founder.

How to Stop a Horse of the Crib, or sucking Wind. —Saw between the upper teeth to the gums.

How to put a Young Countenance on a Horse. Make a small incision in the sunk place over the eye, insert the point of a goose-quill, and blow it up; close the external wound with the thread, and it is done.

To Cover up the Heaves.—Drench the horse with one-fourth pound of bird shot, and he will not heave until they pass through.

To Make a Horse Appear as if he Had the Glanders.—Melt four ounces fresh butter, and pour it, into his ear.

To Distinguish between Distemper and Glanders.—The discharge from the nose in distemper will float in water; in glanders it sinks.

How to Make a True Pulling Horse Balk.—Take tincture cantharides one ounce, and corrosive sublimate one drachm; mix, and bathe his shoulders at night.

How to Nerve a Horse that is Lame.—Make a small incision about half way from the knee to the joint on the outside of the leg and at the back part of the shin bone; you will find a small white tendon or cord; cut it off, close the external wound with a stitch, and he will walk off on the hardest pavement, and not limp a particle.

Dose to Trade on.—One ounce of black antimony, mixed with an ounce of cantharides. A small spoonful twice a day will fatten a horse in ten days to trade on.

TREATISE ON SHOEING.

The following directions taken from Mr. Miles' excellent treatise on horse-shoeing, are the best that can be offered on this subject;

PREPARING THE FOOT.

You must begin by taking off one of the old shoes; and I say one, because the others should always be kept on for the horse to rest upon. All horses stand quieter on shod feet than they can on bare ones, and they are less likely to break the crust. Many tender-footed horses are in positive agony when forced to rest on a bare foot, while the opposite one is held up to be shod. First raise all the clinchers with the buffer, and if the shoe will not then come off easily, loosen some of the nails with the punch; but never tear the shoe off by main force as it splits the crust, widens the nail-holes and destroys the horn. The shoe being off, you should rasp the edge of the hoof all round, and take out any stubs that may be left in the crust. Then you must pare out the foot, and this requires both care and thought. If the horse have a strong foot with plenty of horn, you should shorten the toe, lower the heels and crust and remove the dead horn from the sole, and also from the corners between the heels and the burs. The best way of doing this, is to pare the burs down nearly level with the sole, and then you can get at the dead horn in the corners more easily. The part of the bur which stands up above the sole, would have been

worn away or broken down if the shoe had not kept the hoof off the ground; therefore, you had better always pare it down. But on no account ever cut anything away from the sides of the burs, nor what is called "open out the heels"; be sure you never touch the frog with a knife. Now, remember that there are three things which you must never do in paring out a foot; you must never cut the sides of the burs, nor open out the heels, nor pare the frog, and I will tell you why you must never do them. The burs are placed where they are to keep the heels from closing in upon the frog, and if you thin them by cutting their sides you weaken them, and they can no longer do it, and the foot begins to contract. Opening out the heel does exactly the same thing, by weakening the very parts which nature placed there to keep the heels apart. It takes some time to contract a horse's foot so much as to lame him, and because the contraction comes on by slow degrees, no one notices it till the horse falls lame and then every one wonders what can have done it; but very few hit upon the right cause. The frog is a thick, spongy cushion, the chief use of which is to protect a very important joint called the maricular joint, and it is covered by a thin layer of horn, which keeps in the moisture; and every time you slice off any of the frog, you lay bare a part that was never meant to be exposed to the air, and it dies, and cracks, and forms rays; and if these rays are cut off at every fresh shoeing, the whole frog becomes as dry and hard as a board, and the horse gets an incurable disease called "maricular disease," Therefore, I say leave the frog alone; it will never grow too large, for, long before that would happen. the outer covering will shell off, and a new, horny covering will be found under-

neath. And as to the rays, leave them alone also, and they will fall off of themselves. A weak, flat foot, will bear very little paring or rasping. The crust of such a foot is sure to be thin at the toe and low at the heels, with a thin and weak sole. Therefore, the less you do to it the better, beyond making the crust level where it is to bear upon the shoe. This must be done to all feet, and as the inner quarter, where there should be no nails, does not wear away as fast as the outer quarter where the nails are driven, you should always place a rasp upon its edge across the foot, to be quite sure that the two sides are level. I have known shoes lost from the inside quarter being higher than the outside, which causes the foot to bear unevenly on the shoe. Before you pare out a foot, you should always think of the state of the roads; and if they are dry and covered with loose stones, or have been lately repaired, you should take very little off the sole of any foot, because if you thin it the stones will bruise it; but when the season is wet and the stones worn in, you may pare the sole of a strong foot a little, till it will yield in a very slight degree to the heaviest pressure you can make upon it with your thumb; but you must never pare it thin enough to yield to less pressure than the very heaviest you can bring to bear upon it.

THE SHOE.

In turning your store shoes in the rough, you should leave them longer at the heels than smiths generally do. We shall see the reason for it when we come to "fitting the shoe." And you should make the web as wide at the heels as it is at the toe, and of the same thickness throughout, from the toe back to the heels.

The "fuller" should be carried quite round the shoe to

the heels, and the fullering iron should have both sides alike. It is a far better tool than the one-sided iron in common use, which is generally so narrow and sharp, that it not only makes the groove too small for the heads of the nails to sink into, but it often splits the shoe. A narrow groove may look neater than a wide one, but you will find a wide one much more useful.

CHOOSING A SHOE.

The first thing to look at in choosing a shoe, is the kind of foot you have to deal with. If the foot be a strong, good-shaped one, it will be an easy matter to find a shoe for it, only take care the web is not too narrow, and that the shoe is not too light. A light shoe is apt to bend before it is half worn out; and the pain caused by the pressure of the bent nails against the tender lining of the hoof throws the horse down, and most likely breaks his knees. If the foot should be flat, with a weak, brittle crust, you must still choose a stout shoe, for a horse with such a foot would not go at all on a bent shoe, and the shoe must have a wide web, because the sole is sure to be thin, and will need plenty of cover to protect it. You must also look at the seating, for if the foot is weak and flat, the shoe must be well seated out to prevent its pressing upon and bruising the sole. But if the foot is strong, and the sole arched, there need not be more seating than will allow the point of a picker to pass freely round between the sole and the shoe; otherwise dirt and small stones will get in and bruise the sole as much as the shoe would do if it pressed upon it. Having fixed on a shoe to your mind, begin by cutting off the heels; and you will find a half-round chisel a better tool for the purpose than a straight one, because you should never cut them

off square; if you do, you will find it impossible to fit the shoe properly to the heels, and at the same time keep the web as wide at the heels as it is at the toe, for one of the corners of the shoe will be sticking into the frog, while the other stands out beyond the crust. But if you cut them off, as shown in the figure on page 38, you will have no difficulty in bringing every part of the shoe into its proper place on the foot. And there are no corners left to prevent your fitting the shoe to the exact sweep of the crust at the heels, and you are also enabled to keep the web as wide at the heels as it is at the toe. At this stage of the business, however, it is a good plan always to leave the quarters and heels rather straight and wide apart, till you have fitted the toe, because it is less trouble to bring them in than it is to open them out after the front has been fitted.

THE NAIL HOLES.

You must next open the nail holes, but be sure that they have been stamped so as to pass straight through the shoe, and come out on the foot surface in the flat part of the web; and not partly in the flat and partly in the seating. It is a very bad plan to make them slant inward, as most smiths do, for, in driving a nail, they have first to pitch the point inward, then turn it outward, driving it all the time with the grain of the crust, and at last they bring it out high up in the thinnest part of the hoof, and have the weakest part of the nail for a clinch. Now, instead of all this, if you make the holes straight through the shoe, you have only to drive the nail straight, and it will go through the shoe across the grain of the crust, and come out low down in the thickest part of the hoof, and give you a strong clinch made out of the shank of

the nail, instead of a weak one made out of the point. The advantage of straight holing is, that you are sure never to prick the foot in driving a nail, and you get a firmer hold for the shoe. Everybody knows that a short purchase across the line of the strain is stronger than a longer one in the direction of the strain. "The soundness of the horse's foot, so far as shoeing is concerned, depends more upon the number of nails and where they are placed, than upon anything else; but if the shoe is ever so badly formed, and the nail holes are rightly placed, very little harm will happen to the foot beyond the loss of a shoe; but if the shoe is of the best possible shape, and fitted to the foot in the most perfect manner, unless the nail holes are placed so that the foot can expand, it must in the end become unsound. The portions of the hoof which expand the most are the inner quarter and heel.

You must, therefore, leave those parts free from nails; and the way to do it is never to stamp more than two holes on the inside of the shoe, one about an inch and a quarter from the center of the toe, and the other about three-quarters of an inch behind it. It is quite clear that if you nail both sides of a horse's hoof to an iron shoe, the hoof will be held fast and cannot expand; and when the horse's weight forces the bones of the foot into the hoof, the sensible laminæ, connecting the hoof with the bones, will be squeezed against the shanks of the nails, and cause pain to the horse at every step he takes. The whole number of nail holes should never exceed five—three on the outside and two on the inside. I have proved, over and over again, that five nails will hold on a fore-shoe at any kind of work in any country, and at any pace. When a shoe is properly fitted to the foot, and

fastened by five nails, nothing but the smith's pincers can pull it off." While we agree in the main with Mr. Miles in his practical directions upon the subject of shoeing, yet we think he is in error with regard to the number of nails required to fasten the shoe firmly. It is contrary to the experience of most practical men, who find that with less than three nails on the inside and four on the out the shoe is very liable to come off. They need not be placed so wide apart as Mr. Miles recommends, and will not, therefore, be carried any farther back towards the heels than when only five are used according to his plan. "Having cut off the heels and opened the nail holes, you must next turn up a clip at the toe. Every shoe should have one at the toe, it keeps the shoe steady, and prevents its being forced back. But you should never put one at either side, for if it were put on the inside. it would prevent the hoof expanding, and on the outside it is worse than useless, for the nails there are quite sufficient to keep the shoe from working across the foot, and the clip will interfere with the placing of one of the nails, and will destroy more of the crust than two nails would have done."

FITTING THE SHOE.

You must always bear in mind that "fitting the shoe" means fitting the shoe to the foot, and not fitting the foot to the shoe, as is too often done in many forges. It is a bad plan for a beginner to try to fit the whole of the shoe at once. It is much better till you have had a good deal of practice, to fit the toe first, then the quarters, and lastly the heels. But before you begin to fit the toe, take a look at the old shoe, and see how much of the toe of it is worn away, because just so much of the new shoe should

be turned up from the ground to remove it out of the line of wear.

We all know that horses go better and stumble less in old shoes than they do in new ones, and the reason why they do so is, because they have worn away the toe, and no longer jar the foot by striking the toe against hard substances in the road. A new shoe turned up at the toe is the same thing to the horse as an old one worn down, but with this great difference to his comfort, that he is easy upon the new one from the time it was first put on, whereas he was never easy upon the old one until he had worn away the toe. When a horse wears his shoe hard at the toe, it is the custom of most smiths to weld a lump of steel on it to make him longer in wearing it away. But this only increases the jar to his foot, whereas, turning up the toe makes the shoe last quite as long, and saves the horse from a great deal of unnecessary suffering. A strong foot will bear the toe to be turned up a good deal, but a flat foot is always weak at the toe, and cannot bear the removal of any of the horn from it. The best way, therefore, of dealing with a very flat foot is to fit the shoe to it without turning up the toe, then to make the toe of the shoe red-hot and place it in the vise with the ground surface toward you, and in that position rasp the iron away from that part of the toe which would have rested on the ground; the horse will travel safer and better for it, and the loss of a little iron from the toe will not cause the shoe to wear out faster, for a fleet-footed horse will generally wear away the heels of a shoe long before he has worn out the toe. I will now suppose that you have turned up the toe of the shoe, shortened the toe of the hoof, rasped the crust to receive the turned-

up shoe, and cut a notch for the clip. You had better next, till you have gained experience in fitting a shoe, "spring" the heels, to prevent them burning the back part of the crust while you are fitting the shoe to the fore part; but you must bring them down again before you fit the quarters and heels, and never leave them "sprung" when the shoe is nailed on. You must now put the toe of the shoe in the fire, and make it hot enough to mark the uneven portions of horn, which should be lightly removed by the rasp till an even bed is left for the shoe to rest upon. You need not fear to burn the toe of a strong foot, it can do no harm; but a weak foot with a thin crust, of course, will not bear much burning; still the shoe should be made hot enough to scorch the horn, and show where the hoof fails to bear upon it. When the toe is once properly fitted, there will be very little trouble in fitting the quarters and heels. You have only to bring them in over the back of the anvil, till the edge of the shoe ranges with the edge of the hoof back to the farthest point of the heel on each side, and continue the same sweep until it nearly touches the frog. There must be none of the shoe left sticking out beyond the hoof, either behind or at the side of the heels.

The part of the foot that needs protection from injury, more than any other, is the "maricular joint," which rests upon the frog about an inch or an inch and a quarter behind its point; and the only way to protect it is to keep the web of the shoe as wide at the heels as it is at the toe, and to bring in the heels till they nearly touch the frog; by so doing you lessen the opening of the shoe, and the web of one side or the other will strike upon the stones in the road, and save the frog from coming full force upon

them. But open-heeled shoes leave the frog entirely exposed to very large stones and are the cause of many a severe bruise to the maricular joint, which lays the foundation of future incurable lameness. Another great advantage of bringing in the heels and fitting the shoe close, is the certainty that the horse will not cast his shoe. You leave nothing for stiff ground to lay hold of and if you slightly bevel the inside quarter and heel of the shoe from the foot downward, as is sometimes done to prevent a horse cutting, no ground in the world can pull it off, for the foot, expanding to the weight of the horse, enlarges the hole made by the shoe, and leaves more space for the shoe to come out of than it made for itself to go in at; but if the shoe projects beyond the hoof at any part, and more particularly at the heels, the foot cannot fill the hole made by the shoe, and stiff clay will cling round the projection and pull the shoe off. Having so far finished the shoe, place it on the face of the anvil with the toe hanging over the side, and see that the foot surface of the quarter and heels, are quite level; then make it hot enough to scorch the hoof all round and form a bed for itself. Without this it would be next to impossible to insure close fitting. After you have made the foot as level as you can with the rasp, and the shoe as level as you can on the anvil, the chances are very much against their fitting like two planed boards, as they ought to do; and the quantity of horn to be thus removed is so small as not to be worth thinking about. It is a mistake to suppose that a hot shoe injures the hoof; it does nothing of the kind and you cannot possibly fit a shoe properly without making it hot. I would not have you burn a shoe into its place on the foot before you had taken care

to make both the foot and the shoe as level, but when you have done that, the small quantity of burning that is necessary, to make them come close together can do no harm. I have said before that a weak, thin crust will not bear as much heat as a strong one, and that the shoe should be applied less hot to it; nevertheless, it must be scorched, that you may be sure the shoe fits properly. When you have cooled the shoe, you should "buck-hole" it; that is, make free openings on the foot surface for the nails to pass through, and these openings should be made large enough to take the shanks of the nails, and not merely the thin part toward these points; and mind that in opening them you do not make the holes incline inward, but take great care to make them pass straight through the shoes. Before you "file up" the shoe, hold it firmly in its place on the foot with both hands, and examine carefully whether any light appears between the foot and the shoe, and if you should perceive any, alter the shoe at once, for the crust must bear upon the shoe all round, before you can say the shoe fits the foot as it ought to do.

NAILS, AND FILING UP THE SHOE.

I must say a few words about the nails before we come to filing up the shoe and nailing it on, because the nails in common use are as badly formed as they well can be. Their short, wedge-shaped heads, wide at the top and narrow at the bottom, with shanks springing suddenly from the head and ending in a long narrow point, are most unsafe to trust a shoe to. The head of such a nail can never perfectly fill the hole in the shoe, for the wide top gets tied either on the fuller or the upper of the hole before the lower part has reached the bottom; and when the

shoe is about half worn out the head of the nail is gone, and the shank alone is left in the hole to keep the shoe on. Now, the nails I advise you to use—and you had better always make them for yourself—should have heads which are straight-sided at the upper part, and gradually die away at the lower part into the shank, so as to form a shoulder which will entirely block the bottom of the nail hole; the point at the end of the shank should be short and broad, to enable you to form good stout clinches, which will assist in keeping the shoe firmly in its place till it is quite worn out. Your nails should be made of the very best nail rods you can get, and they should not be cooled too quickly, but left spread about to cool by degrees. They should not, however, be allowed to lie in a heap to cool; the mass keeps in the heat too long, and makes them almost as brittle as if they had been cooled too suddenly. Much time is often wasted in polishing the shoe with the file before it is nailed on; but all that is really needed is to remove the burs about the holes, file off the sharp edges of the shoe, and round the heels, taking care to apply the file hard to that part of both heels which comes next to the frog, so as to slant it from the ground upward away from the frog; but you must be careful not to make the ground surface of the web at the heels narrower in so doing. Fig. 1 shows the foot surface, and fig. 2 the ground surface of an off fore shoe; in fig. 1, A is the clip at the toe, B 1 the outer quarter, B 2 the inner quarter, C 1 the outer heel, C 2 the inner heel; the dark shade represents the seating, and the light the flat surface for the crust to bear upon. In fig. 2, A is the toe turned up out of the line of wear, B 1 the outer, and B 2 the inner quarter, C 1 the outer and C 2 the inner

heel; the light shade represents the ground surface of the web as wide at the heels as it is at the toe; the dark line representing the fuller carried back no farther than is required for the nails, so that the shoe may not be weakened unnecssarily.

NAILING ON THE SHOE.

If the nails are of a proper shape, the holes straight through the shoe, and the shoe fits the foot, it requires vrey little skill to nail it on; only put the point of the nail in the middle of the hole, keep the nail upright, and drive it straight—it must come out in the right place, low down in the crust, without the possibility of wounding the sensitive parts of the foot. The shank of the nail will pass straight through the substance of the crust, and gain a good firm hold of it, leaving you the strongest part from which to form a clinch. The clinches should be short and broad, and not thinned by rasping away any of their substance, but hammered at once into a slight notch made in the hoof under each; and the rasp should never be allowed to go over them after they have been hammered down, for the sharp steel rasp is almost sure to cut through the soft iron clinch just where it turns down, and leave the appearance of a clinch, when, in truth, it has been cut off at the bend, and the loose end only remains buried in the notch in the hoof. You will do good by rasping below the clinches, because you will thereby remove the broken horn that the former nails have destroyed; but on no account ever use the rasp above the clinches; if you do you will cut off the thin outer covering of the hoof, which is placed there to prevent the escape of the natural moisture and to keep the horn tough; and if you rasp it away you will expose the horn to the

air, and it will soon become dry and brittle, and make the hoof difficult to nail to. This thin covering of the hoof is like the shining covering of a man's finger-nail; and most people know from experience how dry and brittle and easily broken a finger-nail becomes when by any accident it loses that covering.

SHOEING WITH LEATHER.

Many tender-footed horses travel best with a covering over the sole, and leather is commonly used for the purpose. You must fit the shoe to the foot with as much care as if nothing were to be put under it; when it is "filed up" and ready to be put on, lay it with the foot surface downward on the leather, and mark the form of the shoe upon it with the end of a drawing knife; then cut the piece out and put it in its place upon the shoe and fix them both in a vise, which will hold them close together while you carefully cut the edge of the covering till it agrees with the edge of the shoe; then turn them in the vise together so as to bring the heels of the shoe uppermost, and cut out a piece from heel to heel slightly curved downward in the center, that nothing may be left projecting for the ground to lay hold of. The next thing to be done is to smear the whole of the under surface of the foot with common tar mixed with a little grease; but be sure that you never use gas tar instead of pine tar, for it dries up the horn and makes it as hard as flint, whereas common tar keeps it moist and tough. Then you must fill the hollow between the frog and the crust on both sides with oakum or tow dipped in the tar, pressing it well into the hollow, till the mass rises above the level of the frog on each side, but never put any oakum or tow upon the frog itself, excepting a piece in the cleft to pre-

vent the dirt and grit working in. Very little is ever wanted on the sole in front of the frog. The use of the oakum is to protect the foot, but more especially the maricular joint, which lies above and across the frog, from being jarred by stones on a hard road; and the best way of doing this is to fill the space on each side of the frog with oakum, in such a manner that it shall share the pressure with the frog, and prevent the full force of the shock from falling on the maricular joint. You must now nail on the shoe exactly as you would do if there was nothing under it; and, if you have attended to the fitting, there will be no fear of the shoe's lifting or coming off.

THE HIND SHOE.

The hind shoe, like the fore shoe, should be brought in at the heels and be made to follow the exact shape of the hoof; but, as the weight of the horse falls differently on the hind feet from what it does on the fore feet, and as the rider often obliges the horse to stop suddenly and without warning, when he is least prepared to do so, it becomes necessary to guard against strains of the hock and back sinews by raising the heels of the shoe; but this should be done in such a manner as will give both heels an even bearing on the ground. Calkins may be, and I believe are useful to heavy draught horses, but they are objectionable to fast work. And turning down the outside heel alone should never be done; it throws the weight upon the inner quarter, which is the least able to bear it, and strains the fetlock joint. The plan I have adopted for many years is to have the last inch-and-a-half toward the heel forged deeper and thicker than any other part of the shoe. The heels are then made red-hot, and the shoe is put in a vise with the hot heels projecting,

which are beaten down with a hammer till they are about an inch long, and then the sides are made even, and the foot and ground surfaces level on the anvil. I have found horses travel pleasanter, and receive less damage to their hocks, back sinews, and fetlock joints with these heels to their hind shoes, than they have with any others that I have tried. The toe of the hind shoe is exposed to great wear, and should be made stout and thick, and rather pointed, with a small clip in the middle to prevent the shoe from being driven backward; and the back edge of the web should be rounded off to guard against "overreach." The toe should rest fairly on the ground to enable the horse to get a good purchase for throwing his weight forward. It is a bad plan to make the toe broad, and to place clips at the side of it; it is nearly certain to cause the very evil it was intended to prevent, by making the horse "forge," as it is called. Many persons think that "forging" is caused by the front of the toe of the hind shoe striking against the heel of the fore shoe, but that is a mistake. The sound is produced in this way. When the horse raises his fore foot from the ground and does not instantly throw it forward, but dwells in the action, the hind foot following quickly is forced into the opening of the fore shoe before the fore foot gets out of the way, and the corners of the broad toe, made still broader by the clips at the sides, are struck against the inner rim of the web of the fore shoe on each side just behind the quarter, and cause the unpleasant clicking sound. The way to avoid this disagreeable noise is to make the hind shoe narrow at the toe, and rather pointed, with a small clip in the centre, and to leave the hoof projecting beyond the shoe across the toe. Then the

projecting horn of the hind foot will enter the opening of the fore shoe, held up to receive it, and be stopped by the sole or frog before any part of the two shoes can come together, and the noise will cease. I have said that you should round off the back edge of the web at the toe to prevent an "over-reach." It is commonly supposed that this also is done by the front of the toe, whereas it is always done by the back edge, which in a well-worn shoe, becomes as sharp as a knife. Now, if the horse, in galloping, does not lift up his fore foot from the ground and throw it forward in time to make way for the hind foot, the hind foot over-reaches it and cuts a piece out of the soft parts above the heel, and produces a very troublesome wound. The hind foot expands less than the fore foot; still you should place the nail holes so as not to confine the foot. For some years I shod my light horses, as an experiment, with only six nails in each hind shoe, and I found it to answer very well for them; but six were not enough to prevent the hind shoes of my large carriage horses from occasionally shifting on their feet. I therefore shod them with seven; and I recommend you, as a general rule, to put seven nails into the hind shoes of all hunters and other horses that are likely to be frequently called upon to exert their muscular powers to the fullest extent. The holes on the inside should be stamped closer together than those on the outside, and they should be placed forward towards the toe, so as to leave the inside quarter and heel free to expand. A small foot can be safely shod with six nails, and no foot can ever require more than seven.

CUTTING.

Horses strike their feet against the opposite leg in such

a variety of ways both before and behind, that it is impossible to form a shoe that would suit every case of "cutting." I therefore advise you, whether the horse cuts before or behind, to fasten something like a boot, covered thickly with melted pipe-clay or chalk, over the place where he strikes the leg, and then trot him along the road. He will soon pick off some of the pipe-clay with the opposite foot, and show you the exact part of the shoe he strikes with, which you can easily alter in the new shoe; and you will often be surprised to see how small a matter causes the mischief.

REMOVING.

The time at which horses' shoes should be removed must depend very much upon circumstances. If a horse wears his shoe out in less than a month, they had better not be removed; and horses with thin, weak horns which grow slowly are likewise better left alone between each shoeing unless their shoes last sexen or eight weeks; in which case they should be removed once within the time. But horses with strong feet and plenty of horn, that wear their shoes four or five weeks, should have them removed at the end of a fortnight; and when horses are doing so little work, or wear their shoes so lightly that they last over two months, they should be removed every two or three weeks, and at the second removal the shoe should be put into the fire and refitted, or the feet will outgrow the shoes, as the horn grows much quicker when a horse is idle than it does when he is in full work.

THE BAR SHOE.

As shown in the accompanying figure, consists of a complete ring of iron, similar to the ordinary shoe as far

as the back of the quarters, but from that part bending inward to meet the web of the opposite side, with which it is welded. It may be used for two purposes. In one case the foot is so prepared that the frog shall touch the shoe, while the heels are quite free and relieved from pressure. In the other the bar is hollowed out so that the frog is relieved, and the pressure brought on the heels. It is specially valuable for tender frogs, or, when these are sound, for corns and weak heels and quarters. The leather sole, which has been minutely described, is used with great benefit on horses with high action, and having weak soles or frogs, or with tender feet from laminitis. It serves to take off the jar from the feet, and prevents stones from bruising the sole. The French shoe differs from the English form in both its surfaces; that which comes in contact with the foot being concave, while the other is convex. To make it fit the foot, the toe and heels of the latter must be pared away and made to fit the shoe. The web is very wide, punched with eight counter-sunk nail holes, the English plan of fullering not being adopted.

The holes are are also punched fully the third of an inch from the edge of the shoe, and the nails are driven in a very great slant.

To Prevent Overreaching or Clicking. — Shoe your horses heavy forward (two-pound shoe), making the heel of the shoe twice the thickness of the toe; the hind shoe made short, narrow web, and very light, with toe twice the thickness of the heel. Placing the heavy shoes to the forward feet will cause him to lift his feet with more energy; also, the heels of his forward feet and the toes of his hind feet will so reverse the action that, in the majority of cases, they will travel clear.

My Plan for Interfering with the Hind Feet.—I think we can safely say that more than half of the horses now in use are animals that cut their ankles, and it is a great objection. A horse of that kind is rejected by many dealers; but we argue that if they are properly shod, the cause can be removed. The habit that smiths in general have of leaving the inside of the shoe twice the thickness of the outer side is all wrong. The shoe should be narrow web and very light; each side of the same thickness. The toe-calk should be welded to the toe one-half inch inside of the centre, leaving the inside of said calk the highest; heel-calks the same hight. By so doing the outside of the shoe is one inch longer than the inside. It is now necessary to pare the outside of the foot to the lowest. Your shoe is now made fast to the foot with five nails—three on the outside and two on the inner; also, three clips, one at the toe and one at each side.

Interfering with Forward Feet.—I have known valuable horses, and fast trotting horses, to cut their ankles inside of the leg, and quite often the knee, and badly, too, with the shoe of the opposite foot; and we think the plan we adopt a good one. The outer web of the shoe should be narrow and light, the inner wide and heavy, with the outside of the hoof pared the lowest. When all other plans have failed, this has proved effectual.

Quarter-Crack.—Much has been said, and various plans devised, by which to heal a quarter-crack, such as scoring with a knife, blistering, cutting with a sharp, hot iron, riveting, and the like; all which in some cases, have proved a failure. Now, let me say, if you will follow my directions, you will have a sound foot in three months.

Above the crack, and next to the hair, cut with your knife an incision one-half inch long, crosswise of the crack, and one-eighth or one-sixteenth inch deep. Now, from the incision, draw a line, one-quarter inch each side, parallel with the crack, down to the shoe; with your knife follow those lines, and cut through the enamel or crust of the foot. You see, now, there is a piece of the crust to be taken out; this is done by loosening the top of the piece next to the hair with your knife. Then, with your forceps, take hold of the piece and pull it off; that leaves a space of one-half inch of the crust taken out from the hair down to the shoe. Fill the cavity with tar, and lace on a soft piece of leather to keep the tar in its place. Keep him quiet for three or four days, and he is ready to drive. Shoe with a bar shoe, leaving some spring to the heel, so that it will not bear hard upon the weak quarter, and in three months you will have a sound foot. Try it.

Riding and Driving.

RIDING.

The accoutrements and aids required are a saddle, bridle, and a whip or stick. Spurs are not commonly used unless the horse is sluggish; but some are never to be depended upon without this stimulus. They are sometimes so indolent as to stumble at every few yards without the spur, but on the slightest touch they are all alive, and their action changes in a moment. With such animals the spur should always be worn, though it need seldom be used.

MOUNTING AND DISMOUNTING.

The directions for these, the preliminary feats of horsemanship, are generally given as if all horses were of moderate height, and all men six feet in their stockings, Thus Captain Richardson in his recent contributions to "sporting" literature, advises as follows: "Stand opposite the near fore foot of the horse, place the left hand on the neck, near to the withers, having the back of the hand to the horse's head, and the reins lying in front of the hand. Take up the reins with the right hand, put the little finger of the left hand between them, and draw them through until you feel the mouth of the horse; turn the remainder of the reins along the side of the left hand, let

it fall over the fore-finger on the off side, and place the thumb upon the reins. Twist a lock of the mane round the thumb or fore-finger, and close the hand firmly upon the reins. Take the stirrup in the right hand and place the left toe in it as far as the ball; let the knee press against the flap of the saddle to prevent the point of the toe from irritating the side of the horse; seize the cantle of the saddle with the right hand, and springing from the right toe, throw the right leg clear over the horse, coming gently into the saddle by staying the weight of the body with the right hand resting on the right side of the pommel of the saddle; put the right toe in the stirrup." Now, this is, in the main, applicable to a man of five feet ten inches or six feet; but to a shorter individual, attempting to mount a horse of fifteen hands, it is an impossibility, simply because he cannot reach the cantle from the same position which enables him to hold the stirrup in his left hand. The Captain is also wrong, in my opinion, in directing that the body should be raised into the saddle directly from the ground, with one movement. This will always bring the rider down into the saddle with a very awkward jerk; and the proper direction is to raise the body straight up, till both feet are on a level with the stirrup iron, and then, with the left leg. held against the flap of the saddle by the left hand on the pommel, the right leg is easily thrown over the cantle, and the body may be kept in the first position until the horse is quiet, if he is plunging or rearing. A short man can generally place his foot in the stirrup while in his hand, but it should be known that all cannot do this, because I have seen young riders much vexed at finding that they could not possibly do what is directed.

In all cases the rider should stand at the shoulder, though with a short man, it is much easier to mount a tall horse from the hind-quarter. If the hand can steady the stirrup it should do so, but if the person is too short it can be placed in the stirrup without its aid; then, taking the reins between the fingers, much as directed in the passage already quoted, and grasping a lock of the mane with the finger and thumb, the body is raised till the right foot is brought to a level with the left, when the right hand seizes the cantle, and with the left grasping the pommel, the body is steadied for a short time, which in the ordinary mount is almost imperceptible, but in a fidgety horse is sometimes of considerable length. The leg is now thrown gently over the saddle, and as it reaches the hand the latter is withdrawn, after which the body sinks into the saddle in an easy and graceful manner. The right foot is then placed in the stirrup, with or without the aid of the right hand holding it. Dismounting is effected by first bringing the horse to a stand-still; then shorten the left hand on the reins, till it lies on the withers, with a steady feel of the mouth, twist a lock of the mane on the finger, and hold it with the reins; bearing also on the pommel with the heel of the hand. Next, throw the right foot out of the stirrup, and lift the body, steadied by the left hand and borne by the left foot, until it is raised out of the saddle; throw gently the right leg over the cantle, and, as it passes it, grasp this part with the right hand; then lower the body gently to the ground by the aid of the two hands and left foot; or if it is a very short person and a tall horse, by raising the body out of the stirrup on the hands, and dropping to the ground by their aid alone. Mounting without stirrups,

while the horse is standing still, is effected as follows. The rider stands opposite the saddle and takes hold of both the pommel and cantle, keeping the reins in the left hand at the same time, and in the same manner as in an ordinary mounting. Now spring strongly from the ground, and by means of the spring, aided by the arms, raise the body above the saddle; then twist the leg over, whilst the right hand is shifted to the right side of the pommel, and by means of both the hands the body is steadied into the saddle. Mounting without stirrups may, by very active men, be effected while the horse is going on, much in the same way as is seen constantly in the circus. The rider runs by the side of the horse, laying hold of the pommel of the saddle with both hands strongly, and, allowing him to drag him along for two or three very long steps, he suddenly springs from the ground and is drawn into the saddle. This feat is seldom achieved by the ordinary equestrian; but it is easier than it looks, and is sometimes of great service with a fidgety horse. Dismounting without stirrups, requires the horse to be brought to a stand-still, then, holding the reins in the left hand both are placed upon the pommel, and by their aid alone the body is raised out of the saddle; the right leg is now thrown over the cantle, and in doing so the right hand seizes it, and with the left lowers the body to the ground. Mounting and dismounting on the off side merely requires all the movements to be reversed, and, reading left for right and right for left, all the directions previously given are applicable. It is very useful sometimes to be able to effect this, as some horses with defective eyes will more readily allow mounting on the off side than on the left.

MANAGEMENT OF THE SEAT AND REINS.

The seat is the first thing to be settled, and it should always be fixed before anything else is done—that is, as soon as the body is placed in the saddle. There are four things necessary to be attended to—first the position of the weight, so as to be sufficiently forward in the saddle; secondly, the fixing of the knees on the paddle part of the flap; thirdly, the proper length and position of the stirrup; and fourthly, the carriage of the body. The weight of the body should be well forward, because the centre of motion is close to the middle of the saddle; and as the weight is chiefly thrown upon the breech, if the seat is far back it is not in that part, but near the cantle that it is placed. But by sitting well forward, the weight is distributed between the breech, thighs and feet, and the horse is able to rise and fall in his gallop without disturbing his rider. The knees must be well forward to effect this seat, and also well in front of the stirrup-leather; for if they are placed behind them the body is thrown too far back, and the hold is insecure. The object of all young riders should be to get as far forward as possible, so that the knee is not off the saddle; and they can scarcely overdo this part of the lesson by any effort in their power. The stirrups must not be too short. These should be about the length which will touch the projecting ankle bone, when the legs are placed as above directed, but out of the stirrups, and when they are placed in them the heel should be about an inch and a half below the ball of the foot. This latter part receives the pressure of the stirrup in road riding, but in field-riding or racing, the foot is thrust "home," and the stirrup touches the instep, whilst the pressure is taken by the under part of the arch of the

foot. The reason of this is that, in leaping, the pressure on the stirrup is almost lost, and if the toe only is placed within it, the foot is constantly coming out. Besides this, in the gallop, the attitude is of that nature that the spring of the instep is not wanted, the weight being too much thrown upon the foot, if standing in the stirrups; and if sitting down in the saddle, the feet should scarcely press upon the stirrups at all, and, therefore, the best place for them is where they will be most secure. The body should not be held stifly upright, but, short of this, it can scarcely be too still, the loins being slightly arched forward. The legs also should be as motionless as possible, and nearly perpendicular from the knee downwards; but if any thing a little forward, the heel being well depressed, and the toe very slightly turned outward. The shoulder should always be square—that is, at right angles to the road taken; and whether trotting or galloping, neither of them should be advanced before the other. The reins are to be taken up as soon as the seat is settled, and, during that operation, with a young horseman, the horse should be held quiet by the groom, who stands on the off side with both the snaffle reins in his right hand; or, if the horse is very fidgety, he may stand in front of him, with a snaffle-rein in each hand; and this almost always keeps quiet any but a thoroughly vicious horse.

The groom should also hold the right stirrup for the rider to place his foot in. In gathering the reins up, they are first raised by the right hand, and then placed in the left. The single rein is held by placing all but the fore-finger between the reins, and then turning them over that finger toward the off side, they are held firmly between it and the thumb. By this mode the hand has only to be

opened, and the ends of the rein may be laid hold of by the right hand to enable the left to shorten its grasp. When the hand is thus closed upon the rein, the thumb should be pointed to the horse's ears, the little finger near upon the pommel of the saddle, and the elbow close to the side, which last is a necessary consequence of the above position of the hand; so that the equestrian has only to look at this part and see that the thumb points to the ear, with the little finger down on the pommel, and he may be quite sure that his elbow is right. When the hand is held in violation of this rule, the elbow is almost sure to be thrown from the side, and the attitude is therefore unsightly, besides which there is less control over the mouth by the action of the wrist. With the single rein, the management of the mouth is easy enough; nevertheless there are various directions for the purpose, adopted in different schools, which are dependent upon altogether conflicting principles. Every tyro knows that the horse turns to the left by pulling the left rein, and to the right by pulling the opposite one; and the problem to be solved is to do this by one hand only. This, in the single rein, is easily effected by raising the thumb toward the right shoulder, when the right rein is to be pulled, or by drawing the little finger toward the fork for the left; in both cases by a turn of the wrist, without lifting the whole hand. But, over and above this action on the mouth, and in many cases independent of it, is a movement which, in trained horses, is capable of much greater delicacy, and which depends on the sensibility of the skin of the neck for its due performance. It is effected by turning the whole hand to the right or left, without any wrist action, so as to press the right rein against the neck in order to

cause a turn to the left, and the left rein against the neck for the opposite purpose; at the same time rather slackening the rein, so as not to bear upon the mouth by so doing. In this way a horse may be "cantered round a cabbage leaf," as the dealers say, with a much greater degree of nicety and smoothness than by acting on the corner of his mouth. But highly broken horses, such as the military troop-horses, are often too much used to their bits to answer to this slight and delicate manipulation; and, therefore, it is eschewed by Captain Richardson, as well as by Colonel Greenwood. I am well aware that some horses never can be taught it, but must always have the bearing on the mouth before they will turn; yet, when it can be taught, it makes the animal so tractable and agreeable to ride that it is a highly desirable accomplishment, and I cannot, therefore, join in condemning its use, but should rejoice if it could in all cases be fully developed.

The double rein is held in two ways, but the best, in my opinion, is as follows: First, take up the snaffle-rein and place it as before, except that the left rein is to be between the ring and middle fingers; then raise the curb-rein and hook it on to the little finger; where it may either be left for use when wanted, or at once drawn over the fore-finger to the proper degree of tightness, and pressed down upon it by the thumb; in which case the reins should all fall over the off side of the horse. By this mode the curb-rein is always at the command of the right hand, and it may be shortened or let out in a moment, which is of constant occurrence in every day's ride. The hand is held as before, with the thumb pointing to the horse's ears; in turning, however, there is much less power of bearing on either side of the bit by raising the thumb

or lowering the little finger, because the distance between the snaffle-rein is only half what it was, and therefore the mode of turning by pressure upon the neck is doubly desirable; and hence its constant adoption in all cases where double reined bridles are used, as in the field and on the road. Sometimes to obviate this objection, the snaffle-reins are placed as in the single-reined bridle, outside the little finger, and then the curb is hooked over the ring finger, between the snaffle-reins, so as to allow of the full manipulation of the mouth by the hand, without bearing upon the neck. But the objection to this is that the curb cannot be shortened without releasing the snaffle, and therefore the horse must either be ridden on the curb alone, while this process is being effected, or his head must be loosed altogether; whereas in the other mode, his mouth is still under control of the snaffle all the time that the curb is being let out or taken in.

THE ORDINARY PACER.

The walk is a perfectly natural pace to the horse, but it is somewhat altered by use, being quicker and smarter than before breaking, and with the hind legs more brought under the body, in the perfect roadster. In this pace the head should not be too confined, and yet the rider should not entirely leave it uncontrolled; the finest possible touch is enough, so that on any trip the hand is at once informed of it by the drop of the head, when by a sudden jerk of the bridle, not too forcible, it rouses the horse and prevents his falling. It is not that he is kept up by pulling the rein, but that he is aroused by it and made to exert himself; for many horses seem regardless of falls, and would be down twenty times a day if they were not stimulated by the heel and bit. Confinement of the head in the walk is absolutely

injurious, and more frequently causes a fall than saves one. A good walker will go on nodding his head to each step, more or less as it is a long or short one; and if this nodding is prevented by the heavy hand of the rider, the forefoot is not properly stretched forward, the step is crippled, and very often the toe strikes the ground; when if the head were at liberty it would clear it well. In horses which are apt to stumble on the walk, I have generally found that a loose rein with the curb held ready for a check is the safest plan; and then the horse soon finds that he is punished the moment he stumbles, and in a very short time he learns to recover himself almost before he is reminded. I do not like the spur or the whip so well, because the use of either makes the horse spring forward and often blunder again in his hurry to avoid this kind of punishment. The check of the curb, on the other hand, makes him recover himself without extra progress or rather by partially stopping him, and thus he is better able to avoid his fall. The body is allowed to yield slightly to the motion of the horse, but not to waddle from side to side as is sometimes seen. Some horses do not stir the rider at all, while others throw him about and fatigue him greatly; and this may generally be foretold when the tail sways much from side to side in the walk, which is caused by the over-long stride of the horse, a desirable accomplishment in the race horse, but not in the lady's horse.

The trot is altogether an acquired pace, and, in the natural state, is never seen for more than a few yards at a time. In it the fore and hind legs of opposite sides move together and are taken up and put down exactly at the same moment. To start a horse in the trot, take hold of both the reins of the snaffle, and bear firmly, but steadily,

upon the mouth ; lean slightly forward in the saddle, press the legs against the horse's sides, and use the peculiar click of the tongue, which serves as an encouragement to the horse on all occasions. If properly broken, he will now fall at once into a trot; but if he breaks into a canter or gallop, he must be checked, and restrained into a walk or a very slow trot called a "jog-trot." In some cases a horse can canter as slow as he walks and here there is often great difficulty in making him trot, for no restraint short of a total halt will prevent the canter. In such cases, laying hold of an ear will often succeed, by making the animal drop his head, which movement interferes with the canter, and generally leads to a trot. Rising in the stirrups with the trot is generally practised in civil life, as being far less fatiguing to both horse and rider, but in the military schools the opposite style is inculcated, because among a troop of horse it has a very bad effect when a number of men are bobbing up and down, out of all time; if it were possible for all to rise together, perhaps the offence against military precision might be pardoned; but as horses will not all step together, so the men cannot all rise at the same moment, and the consequence is that they are doomed to bump upon the sheep-skins in a very tiresome manner, fatiguing alike to man and horse. The civilian's mode is as follows:—At the precise moment when the hind and fore-legs are making their effort to throw the horse forward in progression, the body of the rider is thrown forcibly into the air, in some horses to so great an extent as to make a young rider feel as if he never should come down again. After reaching the utmost height, however, the body falls, and reaches the saddle just in time to catch the next effort and so on as long

as the trot lasts. In this way the horse absolutely carries no weight at all during half his time, and the action and re-action are of such a nature that the trot is accelerated rather than retarded by the weight. No horse can trot above twelve or thirteen miles an hour without this rising, though he may run or pace in the American style, so that it is not only to save the rider's bones but also to ease the horse, that this practice has been introduced, and has held its ground in spite of the want of military sanction. It is here as with the seat, utility is sacrificed to appearances; and whenever the long and weak seat of the barrack-yard supplants the firm seat of the civilian, I shall expect to see the rising in the trot abandoned, but certainly not till then.

In the trot, the foot should bear strongly on the stirrup, with the heel well down and the ball of the foot pressing on the foot-piece of the stirrup so that the elasticity of the ankle takes off the jar, and prevents the double rise, which in some rough horses is very apt to be produced. The knees should always be maintained exactly in the same place, without that shifting motion which is so common with bad riders, and the legs should be held perpendicularly from the knee downwards, the chest well forward, the waist in and the rise nearly upright, but slightly forward, and as easily as can be effected, without effort on the part of the rider, and rather restraining than aiding to the throw of the horse. The military style, without rising, is effected by leaving the body as much as possible to find its own level. The knees should not cling to the saddle, the foot should not press forcibly on the stirrup, and the hand should not bear upon the bridle. By attending to these negative directions the rider has only to lean very slight-

ly back from the perpendicular, and preserve his balance, when practice will do all the rest.

The canter is, even more than the trot, an unnatural and artificial pace. It can very seldom be taught without setting a horse much upon his haunches, and very rarely indeed without the use of the curb-rein. It is a pace in which all the legs are lifted and set down, one after the other, in the most methodical manner, the near or off fore leg leading off, as the case may be, but one foot being always in contact with the ground. To start the canter with either leg it is necessary to pull the opposite rein and press the opposite heel. The reason of this is obvious enough. Every horse in starting to canter (and many even in the canter itself), turns himself slightly across his line of progress, in order to enable him to lead with that leg which he thereby advances. Thus, supposing a horse is going to lead off with the off fore leg, he turns his head to the left and his croup to the right, and this easily gets his off leg before and his near leg behind into the line which is being taken. Now, compel him to repeat this action; it is only necessary to turn him in this way by pulling his head to the left and by touching him with the left heel, after which he is made to canter by exciting him with the voice or whip, whilst, at the same moment, he is restrained by the curb. When once this lead is commenced, the hold on the curb and pressure on the legs may be quite equal: but if, while the canter is maintained, it is desired to change the leading leg, the horse must be collected and roused by the bit and voice, and then reversing the pull of the rein and the leg-pressure from that previously practised, so as to turn the horse in the opposite way to that in which he was started,

he will generally be compelled to change his lead, which is called "changing his leg." The seat for the canter is a very easy one, the knees taking a very gentle hold of the saddle, the feet not bearing strongly upon the stirrups, and the body tolerably upright in the saddle. The hands must not be too low in this pace, but should keep a very gentle but constant pressure upon the bit, and should, if there is the slightest tendency to drop the canter, rouse the mouth by a very slight reminder, and also stimulate the fears by the voice or whip.

The gallop is the most natural of all paces, being seen in all horses while at liberty, from the Shetland pony and Indian "mustang," and the dray horse to the pure breed race horse. It is a succession of leaps, and differs from the canter in one important feature, which separates the one pace from the other. In the description of the latter pace I have said that one foot is always in contact with the ground; whilst in the gallop, whether fast or slow, there is always an interval in which the whole animal is suspended in the air, without touching the ground. Hence it is not true that the canter is a slow gallop, nor is the gallop a fast canter but the two are totally distinct paces as different as walking and running in the human subject. There is, however, the same variation in the leading leg, and the same mode of compelling the lead of one particular leg, as well as of causing the change of lead, though it is much more difficult to effect these objects in the faster pace than in the slower one.

Tho proper seat in the gallop is either to sit down in the saddle or to stand in the stirrups, according to circumstances. The former is the usual seat, and it is only in racing or in the very fast gallop at other times that the

latter is adopted. In sitting down, the feet may be either resting on the ball of the toe, as in other paces, or with the stirrup "home" to the boot, as is common in all field riding. The body is thrown easily and slightly back, the knees take firm hold, the rider being careful not to grip so tight as to distress the horse, which fault I have known very muscular men often commit. The hands should be low with sufficient pull at the mouth to restrain him but not to annoy and make him "fight"; and if he is inclined to get his head down too much, or the reverse, they must be raised or lowered accordingly; when standing in the stirrups is to be practised, the weight is thrown upon them, steadying it with the knees, which should keep firm hold of the saddle flaps. The seat of the body is carried well back, while at the same time the loin is thrown forward; but by this combined action the weight is not hanging over the shoulder of the horse, as it would be and often is, when the breech is raised from the saddle and brought almost over the pommel, with the eyes of the rider looking down his horse's forehead, or very nearly so. If a jocky with a good seat is watched, it will be seen that his leg does not descend straight from the knee, but that it is slightly thrown back from the line, and consequently that his centre of gravity is behind it, so that he can, by stiffening the joint, carry his body as far behind it as his stirrup is, without ceasing to stand in it. This seat cannot be long maintained without fatigue to the rider, and it is only adopted in racing or in short gallops over hard ground, or a steep hill or any kind of ground calculated to tire a horse. The varieties of the gallop are, the hand-gallop, the three-quarter gallop, and full gallop, which is capable of still further extension in the "racing set-to."

They are all, however, modifications of the same pace, varying only in the velocity with which they are carried out. Besides the paces of the horse which are required for his use by man, there are also certain movements very commonly met with, by no means desirable, and others which are taught him for man's extraordinary purposes; the former are called vices, the latter are more or less the rusult of the manage, or breaking-school.

VICES.

The vices are—first, stumbling: secondly, cutting and rearing; thirdly, shying; fourthly, kicking; fifthly, plunging; sixthly, lying down; seventhly, shouldering; and eighthly, running away. The managed actions are backing, passaging, etc. Stumbling is caused by defective muscular action in all cases, though there is no doubt that in many horses this defect is aggravated by lameness, either of the feet or legs, or from defective shoeing. Some horses can never be ridden in safety for many miles, although they will "show out" with very good action; and this is caused by the muscles which raise and extend the leg, tiring very rapidly; after which the ground is not cleared by the toe and when it is struck there is not power to recover from the mistake. Many careless and low goers are constantly striking their feet against stones, but having strong exteriors they draw their feet clear of the obstacle, and easily recover themselves; whilst those which are differently furnished, although they strike with less force, yet they have no power to help themselves, and therefore they fall. The one kind may be kept on their legs by constant rousing and severity, but the weak ones are never safe. In the stumbling from lameness or soreness the most humane course, as well as the safest, is

either to dismount and lead the horse, or to keep him "alive" by the use of the whip or spur. Humanity, taking a middle course by riding quietly, is sure to lick the dust, and the plan should never be attempted. But there are many kinds of careless stumbling; one arises from the toe touching, although well thrown over; but the knee-action being low, the foot is not cleared. This is not a very dangerous kind, and is generally recovered from. The next is from the foot being put down too far back, and too much on the toe, so that the pastern, instead of settling into its proper place behind the perpendicular of the foot, "knuckles over" in front, and so causes the leg to lose its power of sustaining the weight. Then the horse does not generally fall unless the other leg follows suit; but it is a very unpleasant accident, and if a horse is liable to it he is never to be considered safe. Such animals are very deceptive to the young and inexperienced, because they generally lift their knees high, and lead to the supposition that they are safe and good goers. But if they are watched they will be seen to put their feet down behind a perpendicular line, drawn from the front of their knees; and when that is the case the kind of stumbling here alluded to is always to be expected. There is also the stumbling from putting the foot on a rolling stone, which gives way at the moment of bearing the weight, and thus throws the horse off his balance, so as to occasion him to make a mistake with the other leg, which will be greater or less according to his good or bad action. Lastly, there is a stumbling resulting from tender soles or frogs, in which the feet being placed upon a sharp stone, so much pain is occasioned that the knee is allowed to give way, and the same effect is produced as in

the accident caused by a rolling stone, but often in a much more marked degree.

The remedy for stumbling will, in all cases, depend upon the cause. If this is from weakness, no care or good riding will prevent a stumble, though it may avert an absolute fall by taking care to sit well back, and to be on the guard against being pulled over the shoulder in case of a serious mistake. There is no use in holding a horse hard in such a case; he should be kept alive but not hurried; because the more tired he is the more likely he is to come down. Great judgment, therefore, will be necessary to "nurse him" to his journey's end; and this will be best done by an occasional relief to his back and walking by his side. No one should ride such a horse habitually; but if, unfortunately, he finds himself on him and some miles from home, the above is the best course to pursue. When, however, the stumbling is from decided laziness, the only course is to catch hold of the horse's head, and use the whip, or spur, or both pretty severely. Many horses are quite safe at their top speed on the trot, but at a half trot they are never to be trusted. The experienced horseman readily detects the exact pace which his horse can do with the greatest ease and safety, and keeps him to that. Some can trot down hill safely, but are always tripping on level ground (these are low-actioned horses with pretty good shoulders); others, again, always trip going down hill from overshooting themselves, and of course, each must be ridden accordingly. When lameness is the cause of failure, the remedy is either to have the shoe taken off and rectified, if that is the cause, or if in the joints, ligaments or sinews, to give rest and adopt the proper remedies. Cutting is caused by the

horse touching one leg with the other shoe or foot, and it may be either of the ankle or pastern joint, or of the inside of the leg, or just below the knee, which last is called the speedy cut. It arises from the leg's being set on slightly awry, so that the action is not straight-forward; and this is aggravated by weakness or want of condition, so that a horse often cuts when poor, though he is quite free from the vice when high in flesh. The cutting may be either of the fore or hind leg. The remedy is either to alter the shoeing or to apply a boot.

Rearing is a coltish trick, which is generally lost as the colt grows older; it is not nearly so common as it used to be, and a bad rearer is not often seen. When in an aggravated form, it is a frightful vice, and with an inexperienced rider may be attended with fatal mischief. In slight cases, it consists in the horse's simply rising a little before, and dropping again, as if from play only; but in the worst, it is a systematic attempt to throw the rider, and sometimes the horse goes so far as to throw himself back as well. The remedy for this vice is the martingale, which may either be used with rings running on the snaffle-rein, or attached directly to that bit by the ordinary billet and buckle; or again, by means of a running-rein, which commences from the breast-strap of the martingale, and then running through the ring or the snaffle, with a pulley-like action, it is brought back to the hand, and it may thus be tightened or relaxed according to circumstances, so as to bring the horse's head absolutely down to his brisket, or on the other hand, to give it entire liberty, without dismounting. It is a very good plan with an experienced horseman, but its use should not be attempted by any other. With a determined brute, noth-

ing short of this last will prevent rearing; and even it will fail in some cases, for there are some horses which rear with their heads between their fore-legs. Nevertheless, happily, they are rare exceptions, and with the majority the martingale in some form is efficacious. It should never be put on the curb-rein with rearers, and indeed, a curb is seldom to be used at all with horses addicted to that vice; they are always made worse by the slightest touch of the bit, and unless they are very much inclined to run away, it is far better to trust to a straight bit or plain snaffle, which, by not irritating the mouth, will often induce them to go pleasantly, whereas a more severe bit would tempt them to show their temper by rearing. Breaking a bottle of water between the ears, or a severe blow on the same part, may, in some cases, be tried; but the continued use of the martingale will generally suffice. There is also a mode of curing rearers, sometimes attempted by letting them rise, and then slipping off on one side and pulling them back; but it is a dangerous feat for both horse and rider, and has often led to a broken back on the part of the horse, as well as sometimes to severe injury to the rider. It is scarcely necessary to remark that the rider should, in all cases, lean well forward and relay the bridle while the horse is in the air.

Shying is sometimes the effect of fear and sometimes of vice, and there are many horses which begin with the former and end with the latter, in consequence of mismanagement. The young colt is almost always more or less shy, especially if he was brought at once from the retired fields where he was reared, to the streets of a busy town. There are, however, nnmberless varieties of shyers, some

being dreadfully alarmed by one kind of object, which to another is not at all formidable. When a horse finds that he gains his object by turning round, he will often repeat the turning without cause, pretending to be alarmed and looking out for excuses for it. This is not at all uncommon, and with timid riders leads to a discontinuance of the ride, by which the horse gains his end for the time, and repeats the trick on the first occasion. In genuine shying from fear, the eyes are more or less defective; but sometimes this is not the cause, which is founded upon a general irritability of the nervous system. Thus there are many which never shy at meeting wagons or other similar objects, but which almost drop with fear on the sight of a small bird flying out of a hedge, or any other startling sound. These are also worse, because they give no notice, whereas the ordinary shyer almost always shows by his ears that he is prepared to turn. For shyers the only remedy is to take as little notice as possible, to make light of the occurrence, speak encouragingly yet rather severely, and to get them by the object some how or other. If needful, the aid of the spur and whip may be called in, but not as a punishment. If the horse can be urged by the object at which he is shying without the whip or the spur, so much the better; but if not, he must do so by their use. Whenever fear is the cause of shying punishment only adds to that fear; but when vice has supplanted fear, severity should be used to correct it. As a general rule, the whip need never to be used, unless the horse turns absolutely around, and not then unless there is reason to suspect that he is pretending fear. If only he will go by the object, even with a "wide berth," as the sailors say, he may be suffered to go on in his way un-

punished; and nothing is so bad as the absurd severity which some horseman exercise after having conquered his reluctance and passed the object. At this time he should be praised and patted with all the encouragement which can be given; and on no account should be taught to make those rushes so commonly seen on the road, from the improper use of the whip and spur. If punishment is necessary at all, it must be used before-hand; but it often happens that the rider cannot spare his whip-hand until the shying is over; and then, in his passion, he does not reflect that the time has gone by for its employment.

Kicking is a very unpleasant vice, either in the saddle or in harness, but it is not so dangerous in the former as in the latter. Its nature is too well known to need description. It is often the result of play but quite as frequently it arises from a vicious desire to get rid of the rider. The proper mode of treating a kicker is to catch fast hold of the head, and keep it well up, and then to use the whip down the shoulder severely. If the head is not well in hand he will often kick the more but if the head is kept up while the blow is given, he will generally desist. A gag snaffle is very useful with confirmed kickers, as it serves to keep the head up better than any other bit.

Plunging consists in a series of bounds or springs, by which the horse evidently hopes to relieve himself of his burden. His back is generally rounded, and very often he will "back," or jump off the ground perpendicularly, by which a weak rider is unseated. The remedy is to sit still and keep the head confined, though not too closely. Very often plunging is followed by a fit of kicking, for which the rider should be prepared. If there is reason to expect that a horse will commence this trick, a cloth, rolled like

a soldiers cloak and buckled to the front of the saddle, is a great assistance; and lying down is a vice which only ponies and other obstinate brutes indulge in, and is seldom met with in well bred horses. The spur will sometimes keep them up, but in bad cases there is no remedy but submission. Shouldering is also a trick only met with among badly bred horses, though sometimes horses of all breeds, if they have been badly broken, will adopt this expedient by attempting to crush the knee against a wall or paling. If, however, the hand and foot are put strongly out, the horse cannot use enough lateral pressure to overcome their resistance, and no harm is done. Running away is only an extreme form of pulling in the gallop, but sometimes it is of a most vicious description, and the horse gallops as if maddened by excitement. It is a most dangerous vice, as it is generally practised at times when it is most inconvenient, as in crowded thoroughfares, etc.

For horses which run away, various severe bits have been invented, but nothing has ever yet been introduced which is so successful as the "Bucephelus nose band." It is a good plan in determined brutes to make them run to a stand-still, by giving them an up-hill "burster," which may generally be managed, though there are some which are only made worse by this treatment. Still, it generally succeeds, and most horses are rendered quiet for some time by such an effort; nevertheless, they generally try again as soon as they are fresh, and they are seldom to be trusted with any riders but good horsemen. It is of no use to pull dead at these animals, but it is better to let them go when there is plenty of room, and then to try what a sharp and severe pull will do; not keeping it up too long, if effectual, but loosing the mouth again for

a time, and then trying again. Sometimes, however, there is no room for this, and then the only plan is to try and bring the head round, either with a view of galloping in a circle, or to run the head against a fence or even a strong gate; sometimes anything is better than a straight course—as, for instance, into a crowded thoroughfare, where there would be an almost positive certainty of mischief; and in such a case it is better to do anything than to persevere in the course which the run-away is taking. Here the horse must be pulled into any insurmountable obstacle; and all risk must be run of damaging him or even his rider, who will, however, generally escape with slight bruises if the horse is run full tilt against the object, and not too obliquely, which will not at all answer the purpose. Backing is necessary for all horses to be taught, though not so often required as in harness-horses. It is always one of the first things drilled into a colt by its breaker, and the finished and broken horse will as a matter of course, readily obey the hand of the rider when he gently draws him back. The pull should not be harder than the particular mouth requires, some horses being easily irritated by too severe a confinement of the mouth. If a horse obstinately refuses to stir, the bit may be gently "sawed" from side to side, which seldom fails to make him stir. When backing is adopted by the horse with vicious intentions and contrary to the will of his master, it is called "jibbing," and is a most unmanageable trick, for which the remedy is patience. Punishment never answers, and the horse only jibs the more; but quietly waiting until he is tired, the animal will generally give up the fight, and continue his progress in the desired direction. Passaging is a feat of horsemanship never

used in this country except in the military schools. It is the action of the horse by which he moves sideways, using the two legs of each side at a time, and following them up, advancing them to the right or left, by bringing the other two up to them.

THE RIDE.

The ride is putting into practice all the directions which have already been given. When the orders have been issued for a horse to be prepared, he is brought to the door ready saddled and bridled. It is the groom's duty to place the saddle properly on; but it is as well that the equestrian should know how and where to put it on. The common direction is to put the saddle on "one's hand's breadth behind the shoulder blade," but this is too far back, and few saddles will remain there. It is far better to place it at once where it fits than to give it room to come forward because the girths only become more slack as it shifts, and allow it to press still more forward than it otherwise would; whereas, if it had been first placed where it naturally belonged or fitted, the girths would have kept tight, and it would have moved no further. Place the saddle where it fits, taking care to have it as far back as it will fit. The bridle should be put on, with the bit neither too high nor too low, in the mouth, and with the throat-lash of the proper tightness, which points can only be learned from experience. After leaving the stable, and if the weather is fine, walking the horse about for a few minutes, the girths will generally require tightening. When the horse is to be mounted, the rider, if he cannot fully depend upon his assistance, should see to his girths, and that his bridle is properly put on, with the curb of

the right degree of tightness, if he uses a double-reined bridle. The groom brings the horse up to the door, holding it with the left hand by the snaffle-reins, and bearing on the off stirrup to resist the weight, if the rider is a heavy man, which will prevent the saddle from twisting. The rider then mounts, and puts his horse into a walk, which should always be the pace for the commencement of a ride for pleasure. He may, in this pace, as I have already explained, give his horse considerable liberty of the head, and he will have no difficulty in turning him to the right or left, either by the use of one hand or both, or by bearing upon the neck according to the mode to which the horse has been broken. After a short distance, he may practise the various paces, and if he is inclined to learn to ride well, he may at times throw the stirrups across the saddle, and attempt to canter without them. In learning to ride without stirrups, it is a very good plan to have the inside of the trowsers lined with a strip of black leather, in the French fashion, which takes a good grip of the saddle; for with cloth trowsers and a smoothly polished saddle, there is very little hold to be obtained, and the balance alone must preserve the seat. With this addition all the paces may soon be mastered without the aid of the stirrups; but the trot will be the last of necessity, because it is by far the most difficult. No rise can then be managed; and the body must be suffered to take its chance upon the saddle, leaning back to rather more than the perpendicular position, and not attempting to do more than to keep the balance. When riding without stirrups, the feet should be carried in the same position as if they were being used, the heel being carefully depressed, and the toes raised by the muscular power of the leg.

FEMALE HORSEMANSHIP.

The saddlery for the use of the ladies is similar in principle to that devoted to the gentleman's riding, with the exception that the bits and reins of the bridle are lighter and more ornamental, and the saddle furnished with crutches for side-riding; the reins are narower than those used by gentlemen, but otherwise the same. The saddle should be carefully fitted to the horse, and there should always be a third crutch, the use of which will hereafter be explained There is an extra leather girth, which keeps the flaps of the saddle in their places. The stirrup may either be like a man's, with a lining of leather or velvet, or it may be a slipper, which is safer, and also easier to the foot. The lady's whip is a light affair; but as her horse ought seldom to require punishment, it is carried more to threaten than to give punishment. A spur may be added for a lady's use; it is sometimes needful for the purpose of giving a stimulus at the right moment. If used, it is buckled on to the boot, and a small opening is made in the habit, with a string attached to the inside, which is then tied around the ankle, and thus keeps the spur always projecting beyond the folds of the habit. A nose-martingale is generally added for ornament; but no horse which throws his head up is fit for a lady's use. The lady's horse ought to be the most perfect of goers, instead of being, as it often is, a stupid brute, fit only for a dray.

Many men think that any horse gifted with a neat outline will carry a lady; but it is a great mistake; and if the ladies themselves had the choice of horses, they would soon decide to the contrary. The only thing in their fa-

vor, in choosing a lady's horse, is that the weight to be carried is generally light, and therefore a horse calculated to carry them is seldom fit to mount a man, because the weight of the male sex is generally so much above that of an equestrian lady. Few of this sex who ride are above one hundred and thirty pounds, and most are below that weight. But in point of soundness, action, mouth and temper, the lady's horse should be unimpeachable. A gentleman's horse may be good, yet wholly unable to canter, and so formed that he cannot be taught; he, therefore, is unsuited to a lady; but, on the other hand, every lady's horse should do all his paces well. Many ladies, it is true, never trot; but they should not be furnished with the excuse that they cannot because their horses will not. In size the lady's horse should be about fifteen hands or from fourteen and a half to fifteen and a half; less than this allows the habit to trail in the dirt and more makes the horse too lofty and unwieldy for a lady's use. In breaking the lady's horse, if he is of good temper and fine mouth, little need be done to make him canter easily, and with the right leg foremost. This is necessary, because the other leg is uncomfortable to the rider from her side position on the saddle; the breaker, therefore, should adopt the means already described, and persevere until the horse is quite accustomed to the pace, and habitually starts off with the right leg. He should also bend him thoroughly, so as to make him canter well on his hind legs, and not with the disturbed action which one so often sees. The curb must be used for this purpose, but without bearing too strongly upon it; the horse must be brought to his paces by fine handling rather than by force, and by occasional pressure, which he will yield

to and play with if allowed, rather than by a dead pull. In this way, by taking advantage of every inch yielded, and yet not going too far, the head is gradually brought in and the hind legs as gradually are thrust forward, so as instinctively to steady the mouth and prevent the pressure which is feared. When this "sitting on the haunches" is accomplished, a horse-cloth may be strapped on the near side of the saddle, to accustom him to the flapping of the habit; but I have always found, in an ordinarily good-tempered horse, that if the paces and mouth were all perfect, the habit is sure to be borne.

It is a kind of excuse which gentlemen are too apt to make, that their horses have never carried a lady; but if they will carry a gentleman quietly, they will always carry a lady in the same style, though they may not perhaps be suitable to her seat or hand. The directions for holding the reins, and for their use, already given, apply equally well to ladies; the only difference being that the knee prevents the hand being lowered to the pommel of the saddle. This is one reason why the neck requires to be more bent than for the gentleman's use, because, if it is straight, or at all ewe-necked, the hands being high raise the head into the air, and make the horse more of a "star gazer" than he otherwise would be. Many ladies hold the reins as in driving, the directions for which are given elsewhere. (See Driving.) It is in some respects better, because it allows the hand to be lower than in the gentleman's mode, and the ends of the reins fall better over the habit. In mounting, the horse is held steadily, as for a gentleman's use taking care to keep him well up to the place where the lady stands, from which he is very apt to slide away. The gentleman assistant then places

his right hand on his right knee, or a little below it, and receives the lady's left foot, Previously to this, she should have taken the rein in her right hand, which is placed on the middle crutch; then with her left on the gentleman's shoulder, and her foot in his hand, she makes a spring from the ground, and immediately stiffens her left leg, using his hand, steadied by his knee, as a second foundation for a spring: and then she is easily lifted to her seat by the hand following and finishing her spring with what little force is required. As she rises, the hand still keeps hold of the crutch, which throws the body sideways on the saddle, and then she lifts her right knee over the middle crutch. After this she lifts herself up from the saddle, and the gentleman draws her habit from under her until smooth; he then places her left foot in the stirrup, including with it a fold of her habit, and she is firmly seated, and should take her reins, and use them as directed for the gentleman. The great mistake which is constantly made in mounting is in the use of the lady's knee, which should be carefully straightened the moment it can be effected; for if kept bent it requires great power to lift a lady into the saddle, whereas, with a good spring and a straight knee, she ought to weigh but a few pounds in the hand.

The lady's seat is very commonly supposed to be a weak one, and to depend entirely upon balance, but this is the greatest possible mistake; and there can be no doubt from what is seen in private, as well as in the circus, that it requires as great an effort of the horse to dislodge a good female rider, as to produce the same effect upon a gentleman. Even with the old single crutch, there was a good hold with the leg, but now that the third is added, the grip

is really a firm one. When this is not used, the crutch is laid hold of by the right leg, and pinched between the calf of the leg and the thigh, so as to afford a firm and steady hold for the whole body, especially when aided by the stirrups. But this latter support merely preserves the balance, and is useful also in trotting; it does not at all give a firm, steady seat, though it adds to one already obtained by the knee. When two crutches are used, the leg is brought back so far as to grasp the crutch as before, but between the two knees the two crutches are firmly laid hold of, the upper one being under the right knee, and the lower one above the left. The right knee hooked over the crutch keeps the body from slipping backwards, whilst the left keeps it from a forward motion, and thus the proper position is maintained. In all cases, the right foot should be kept back, and the point of the toe should scarcely be visible. These points should be carefully kept in view by all lady riders, and they should learn as soon as possible to steady themselves by this grasp of the crutches without reference to the stirrup-iron. In spite of her side-seat, the body should be square to the front, with the elbow easily bent and preserved in its proper position by the same precaution. The whip is generally held in the right hand, with the lash pointing forward, and toward the left, and by this position it may be used on any part of the horse's body by reaching over to the left and cutting before or behind the saddle, or with great ease on the right side. Its use may, therefore, in all cases be substituted for the pressure of the leg in the description of the modes of effecting the change of leg, turning to the left or right, or leading with either leg. With this substitution, and with the caution against all

violent attempts at coercion, which are better carried out by the fine hand and delicate tact of the lady, all the feats which man can perform may well be imitated by her. In dismounting the horse is brought to a dead stop, and his head held by an assistant; the lady then turns her knee back again from the position between the outside crutch, takes her foot out of the stirrup, and sits completely sideways; she then puts her left hand on the gentleman's shoulder, who places his right arm around her waist, and lightly assists her to the ground,

DRIVING.

Driving a single horse is a very simple process, and requires only a good hand and eye. The reins are held differently from riding; the near rein passing over the fore-finger, and the off between it and the middle finger and then through the hand, descending from the palm by the side of the knees. The thumb keeps the near rein firmly against the forefinger, and I have always found it a good plan to pass both reins out of the hand between the little and ring fingers, so that without keeping the thumb very firmly fixed, they do not slip through the fingers when the horse makes a mistake. This has saved me many an accident, because when a person is tired with driving many miles and the attention flags, a horse in making a mistake is not checked till it is too late, in consequence of the thumb and fore-finger suffering the rein to slip some inches before it is held firmly between them; but when passing through an additional pair of fingers, and making an angle in order to do this, it is astonishing how firmly the reins are held, and yet with how much less fatigue to the hand. The bearing-rein is now

almost totally out of use in a single harness, where it is no more needed than for riding, because the driver has even more command of the mouth than if he were in the saddle. There is no doubt that a bearing rein is better than a careless driver; but with ordinary care the horse is saved by a slight check, which does not keep him up, but makes him keep himself up. This he is partly prevented from doing from the confinement of the head, caused by the bearing rein; and, therefore, although it is useful in driving the horse to hold the head up, it is injurious to an equal extent by confining him from that quick exertion of his power, which might save him from a fall. It is true that many old horses having been used to lean upon the bearing-rein—can not safely be driven without; but in most of those which have never been accustomed to its use, it may safely be dispensed with. I have had some few which never could be trusted without a bearing-rein broken in carefully for me; but this was from defective action, and from that straight-necked form which is almost sure to lead to a heavy hanging upon the bit.

It is astonishing how seldom one sees a city horse down now as compared with former years, when this rein was in general use; and yet those horses are quite as hard worked as ever, and often with scarcely one good leg out of the four. But with their heads at liberty, and only a double reined snaffle, they rarely make a mistake; or, if they do they are almost sure to save themselves from it. Too tight a rein is quite as bad as holding it too loose, and a gagged horse will be so confined in his action as to be always making mistakes. The head should have a tolerable degree of liberty, the mouth just feeling the hand, so as in a good mouth to lead to that playing with the bit which is the

perfection of breaking and driving. By this means that tendency to keep within the bit, and to avoid its pressure which a fine mouth will always show; and yet, when there is high courage, a constant desire to pass forward as soon as the hand is at all relaxed; up a steep hill, the head should have entire liberty, while down-hill the hand should be shortened upon the rein, and with his knees straight, and the feet well out, the driver should be prepared for a mistake, and ready to assist if it is made, not by violently dragging at the head, but by checking sufficiently without gagging the horse. The mere avoiding of other vehicles in meeting or passing is too simple an affair to require minute description. In driving a pair, the great art consists in the putting them together, so as to draw equally, and to step together. To do this well, the horses must match in action and temper, two ponies being much better than a free tempered horse, with a horse with but little spirit; because, in this case, the whip applied to the one only makes the other more free, and as a consequence, it is impossible to make them draw equally. In some cases, where two horses are exactly equally matched, the coupling-reins must both be of equal length; but this is seldom the case; and when they do not do an equal amount of work, the coupling-rein of the free one must be taken up, and that of the idle horse let out. In watching the working of the two horses, the pole pieces should always be the guide; and if both are slack, with the end of the pole steady, and neither horse shouldering it, the driver may rest contented that each of his horses is doing his share; if, however, the pole is shouldered by either, that horse is a rogue, and is making the other do more than his share, keeping the pole straight by the

pressure of his shoulder instead of pulling at the traces. On the other hand if either horse is pulling away from the pole, and straining at the pole-piece, he is doing more than his share, and his coupling-rein must be taken in accordingly. Sometimes both shoulder the pole, or spread from it, which are equally unsightly habits, and may generally be cured by an alteration of the coupling-reins of both horses, letting them out for the shouldering and taking them in for the opposite bad habit. The reins are held for double-harness as for single. Bearing-reins are more necessary here than in single harness, because there is not the same immediate command of a horse; but in tolerably active and safe goers there is little necessity for them. It is only when horses stand about much that they are wanted, and then only for display; but for this they certainly are of service, as the horse stands in a very proud and handsome attitude when "borne up," and the pair match much better than when they are suffered to stand at ease. In driving a pair, it should always be remembered that there are two methods of driving round a curve, one by pulling the inside rein, and the other by hitting the outside horse; and these two should generally be combined, graduating the use of the whip by the thinness of the skin of the horse. In all cases the whip is required in double-harness, if not to drive horses when thoroughly put together, yet to make them pull equally; and there are few pairs which do not occasionally want a little reminding of their duties. A constant change from one side to the other is a prevention of those tricks and bad habits which horses get into if they are always kept to one side only. The coachman should, therefore, change them every now and then, and back

again, so as to make what was a puller from the pole rather bear toward it than otherwise when put on the other side. Various devices are used by old hands for curing vices, which the fore part of this book explains.

BY-LAWS

OF THE

National Association for the Promotion of the Interests of the American Trotting Turf.

ARTICLE 1. *Name.* This Association shall be known under the name of the "National Association for the promotion of the interests of the American Trotting Turf."

ARTICLE 2. *Object.* This Association shall have for its principal object, the prevention, detection and punishment of frauds on the Trotting Turf of America, and to elevate the standard of trotting.

ARTICLE 3. *Officers.* The officers of this Association shall consist of a President, as many Vice-Presidents as there are associated courses repesented, Secretary and Treasurer The duties of the Secretary and Treasurer shall be discharged by one and the same person.

ARTICLE 4. *President.* The President shall be a member of the Board of Appeals, and, when present, shall preside at all meetings of the Association and of the Board of Appeals, and shall have the casting vote at such meetings.

ARTICLE 5. *Vice-Presidents.* It shall be the duty of the Vice-Presidents to see that the Secretary is furnished with a statement of all official acts of the executive officers of their respective courses, relating to this Association; and at the end of the trotting season, each year, to prepare a review of the whole, together with an official summary of all races upon their respective courses: said summary shall contain the date, the amount or value of the purse, match or sweepstake, the full terms and conditions of the race; the name of the person nominating each horse; the name of each driver, and the color, sex and name of each horse entered; the position

of each and every horse in each heat; the drawn, distanced and ruled out horses; the official time of each and every heat; the names of the Judges, and such notes and remarks as are necessary for a plain comprehension of the whole. They shall also furnish a list of all persons that have been fined, suspended or expelled, together with the amount of fines and term of suspension; and shall furnish a list of the officers of their respective associations or courses, with their post office address.

ARTICLE 6. *Secretary and Treasurer.* It shall be the duty of the Secretary, when present, to act as Secretary at all meetings of the Association and Board of Appeals. He shall keep a record, to be kept in a book for that purpose, of all the proceedings of such meetings; and, by order of the President, call all meetings of the Association and Board, and attend to all correspondence relating to the affairs of the Association. He shall furnish each associated course with a written or printed copy of the proceedings of all the meetings of the Association and Board of Appeals; and, at the close of each year, he shall compile and arrange an official record, which shall contain the proceedings in detail of all meetings of this Association and Board of Appeals, during the year; a complete record of all races over each and all the associate courses; a complete list of persons and horses that have been fined, suspended or expelled, together with the amount of fines and term of suspension, and such other matters as may be of interest and service to the Association. Of the matter so collected, he shall have prepared at least one printed copy for each of the associated courses, and as many more as the Board of Appeals may, in their judgment, deem expedient; said last mentioned copies to be disposed of by sale, for the benefit of the Association, or in such other manner as the Board of Appeals may direct.

And in his capacity as Treasurer, he shall receive and take charge of all monies that may be due to the Association, and make therefrom such disbursements in payment of demands growing out of the legitimate transactions of the Association, as may be sanctioned by the Board of Appeals. He shall

keep full, accurate and distinct accounts of his receipts and disbursements, and shall prepare a statement at the end of each year, (and as much oftener as the Board of Appeals may require,) showing the receipts, expenses and the financial condition of the Association.

ARTICLE 7. *Board of Appeals.* The board of Appeals shall consist of nine (9) members, of whom the President shall be one, and shall have semi-annual meetings at the office of the Secretary, viz.: the second Tuesday in July and January. Special meetings may be called whenever deemed necessary by the President; and at all meetings, whether regular or special, four (4) members of the Board shall constitute a quorum for the transaction of business. Due notice of all meetings in manner provided for notice of Association meetings shall be given by the Secretary to each member of the board.

The Board of Appeals shall have the general management, control and superintendence of the affairs of this Association, subject to the rules, regulations and by-laws, and to the Secretary must be addressed all charges against any member of this Association. They shall examine all evidence of fraud or other matters relating to the turf that is brought before them, and shall take such measures to ascertain the truth or falsity of all charges as in their judgment is deemed necessary and proper.

The Board of Appeals shall have power to call a new congress whenever deemed necessary to alter, annul, amend or add to these rules. They shall also be entitled to the privilege of honorary membership on the grounds and premises of all the associated courses.

ARTICLE 8. *Delegation.* A delegation to a general congress shall consist of one or more persons, not exceeding three, duly authorized in writing by the President or Secretary of their respective associations, or proprietor or proprietors of individual courses.

ARTICLE 9. *Admission of Members.* All applications for admission to this Association must be made in writing, duly signed and addressed to the Secretary of the Board of Ap-

peals, who alone are authorized to admit members. All new members shall abide by all previous action of this Association, a copy of which shall be furnished them by the Secretary.

ARTICLE 10. *Fee of Membership.* The fee of membership shall be determined by the Board of Appeals, and shall be payable on or before the first day of April in each year.

ARTICLE 11. *Forfeiture of Membership.* An association having once been admitted shall continue a member upon the prompt payment of dues for the succeeding year, on or before its commencement, unless expelled by vote of the Board of Appeals, for a disobedience of the rules and regulations or by-laws of this Association.

ARTICLE 12. *Duties of Members.* It shall be the duty of each member to see that the rules, regulations and by-laws of this Association are rigidly enforced upon their respective courses.

Members shall not allow their courses to be used for exhibitions of a character degrading to the public standing of the National Association, and they shall be held responsible for any violation of the rules of this Association.

They shall keep on file all letters, entries and communications relating to their respective courses for future reference.

They shall furnish each owner, trainer, rider or driver, with a copy of the rules of this Association, if so requested, and shall have at least one copy posted in some conspicuous place in the Judges' stand for the covenience of the Judges.

ARTICLE 13. *Clerk of the Course.* It shall be the duty of each member to provide the services of a competent person to assist the Judges in each and every race upon their respective courses, who shall be styled the Clerk of the Course. He shall understand the rules of this Association, and be able to give any information in regard to them that may be required by the Judges.

He may assist in weighing riders or drivers, assigning the position of horses before the race, or other similar duties at the request of the Judges; and shall keep a book in which shall be recorded a description of the dress or colors of each

rider or driver, and the weight carried; he shall note the time when a heat is finished, and shall notify the Judges, or ring the bell at the expiration of the time allowed between heats; he may assist the Judges in placing the horses at the finish of a heat. He shall record in a book to be kept for that purpose, an account of every heat, in the following form, to wit: First—all horses entered, and the name of the riders or drivers; next, the starting horses and the positions assigned them; next, a record of each heat, giving the position of each horse at the finish; then the official time of each heat; and, at the end, an official summary of the race, giving the drawn, distanced and ruled out horses, if any there be. He shall record all protests, fines, penalties and appeals. This book shall be signed by the Judges, and shall constitute the official record.

ARTICLE 14. *Annual Meetings.* The annual meetings of this Association shall be held the first Wednesday in February in each year, at such place as may be chosen at the annual meeting next preceding; a written or printed notice of each meeting shall be mailed, postage paid, and addressed by the Secretary to each member, at least thirty days prior to such meeting; and only those associations or courses shall be entitled to be represented at such annual meetings as may, according to the books of the Association, have been members for six months next preceding such meeting. Each member shall be entitled to one vote, and they may vote by delegates duly authorized, or in writing as they prefer.

ARTICLE 15. *Special Meetings.* Special meetings of the Association shall be called by the Secretary, whenever requested by the Board of Appeals, or in writing by a majority of the members, and fifteen days notice shall be given by the Secretary, to each member, of special meetings in the manner provided for notice of annual meetings; one-fourth of the members shall be represented to constitute a quorum for the transaction of business in any special meeting.

ARTICLE 16. *Election of Officers.* The President and Board of Appeals shall be chosen at the inaugural meeting of the Association, and annually thereafter, and shall retain their respective offices until their successors are appointed. In

case of the resignation or death of any of their members, the Board of Appeals shall have power to fill vacancies until the next election.

The Vice-President shall be chosen annually by the executive officers of their respective associations or courses, in such manner as they may elect, and shall retain their office until a successor is appointed. Notices of all such elections shall be given to the Secretary of this Association within thirty (30) days thereafter.

The Secretary and Treasurer shall be elected by the Board of Appeals, and shall hold his office until a successor is appointed.

ARTICLE 17. *Entries.* The hour for closing the entries of all purses or premiums offered by any of the associated courses shall be 9 o'clock, P. M. All letters of entries bearing postmark the date of closing, shall be eligible.

ARTICLE 18. *Fines.* All fines shall revert to the National Association, and shall be paid to the Treasurer upon demand.

ARTICLE 19. *Length of Tracks.* All members of this Association shall, upon demand, furnish the Secretary with the statement of a competent civil engineer, who shall certify under oath the exact distance of their respective tracks, measured just three feet from the pole—that is to say, the inside fence or ditch. These certificates shall be endorsed by the proper officer of the course designated, and shall be placed upon the records of this Association.

ARTICLE 20. *By-Laws.* Each Association may be governed by its own by-laws, provided they do not conflict with these, or with the rules and regulations adopted by this Association.

These by-laws may be amended whenever required by two-thirds of the members; but notice of such amendment shall be given in the call of the meeting at which they are to be submitted.

A true copy from the record, March 9, 1871.

Attest—

GEORGE SMITH,
Secretary.

RULES AND REGULATIONS

OF THE

NATIONAL ASSOCIATION

FOR THE PROMOTION OF THE INTERESTS OF THE AMERICAN TROTTING TURF.

ENACTED BY THE NATIONAL ASSOCIATION AT THE ANNUAL MEETING, HELD AT BUFFALO, NEW YORK, ON THE FIRST WEDNESDAY IN FEBRUARY, 1871.

RULE 1. *Mandate.* All trotting and pacing engagements and performances over the several courses, which are, or shall be represented by membership in the "NATIONAL ASSOCIATION FOR THE PROMOTION OF THE INTERESTS OF THE AMERICAN TROTTING TURF," and each and every person who shall, in any way, be concerned or employed therein, as well as all associations and proprietors themselves who are or shall become members of said National Association, shall be governed by the following rules from and after February 1st, 1871: [See, also, Articles 12 and 13 of By-Laws.]

RULE 2. *Entries.* All entries for premiums must be made under cover, enclosing the entrance-money for purses and forfeits in sweepstakes, and then sealed and addressed to or deposited with the Secretary, or some person authorized to receive the same, at such time and place as the associations may have prescribed. Notices of intention to enter will be received by talegraph up to the hour advertised for

closing, and all such entries shall be eligible, provided the entrance fee specified shall be paid in due course, by mail or otherwise. [See, also, Art. 17 of By-Laws.]

It shall be the duty of the Secretary, or other person authorized, to prepare the list of entries for publication, comprising all such information in a comprehensive manner, for the enlightenment of the general public and parties to the race; and all entries, as aforesaid, shall be opened and announced at a public meeting, of which reasonable notice by advertisement or otherwise, shall be given to the parties in interest.

RULE 3. *Entrance Fee.* The entrance fee shall be ten per cent. of the purse, unless otherwise specified; and any person refusing to pay his entrance dues upon demand by the proper authority, shall, together with his horse or horses, be suspended until they are paid in full, with an addition of ten per cent. PENALTY, and interest at seven per cent. per annum, until paid. The penalty to go to the National Association.

RULE 4. *How many to Enter.* In all purses, three or more entries are required, and two to start, unless otherwise specified.

RULE 5. *Horses to be Eligible when Entries Close.* A horse shall not be eligible to start in any race, that has beaten the time advertised, prior to the closing of the entries for the race in which he is entered.

Horses shall not be eligible if the time specified has been beaten by them at a greater distance; that is, a horse having made two miles in five minutes is eligible for a 2.30 race, but not eligible for a race slower than that time.

RULE 6. *Name and Description of Each Horse Required.* An accurate and satisfactory description of each entry will be required, and shall be in the following form, to wit.:

Color. The color and marks shall be accurately given.

Sex. It shall be distinctly stated whether the entry be a stallion, mare or gelding, and the names of the sire and dam shall be given when known.

Name of Horse. Every horse shall be named, and the name correctly and plainly written in the entry; and if the horse has trotted in a race under a different name within two years, such former name or names must be given. If a horse has trotted in any race, without a name, mention must be made in the entry of a sufficient number of his or her most recent performances, to enable persons interested to identify the horse; provided that it shall not be necessary to furnish any one association or proprietor with the same record the second time. In entries and nominations hereafter made, the words "No name" shall not be received as a name. Neither shall such descriptive words as "bay horse," "grey mare," etc., be allowed as names.

A horse having once been named, shall not again start in a race on any course in the United States or Canadas, without a name, or under a different name, unless the foregoing provisions have been complied with.

Double Teams. In all double-team races, the entry must contain the name and description of each horse, in the manner provided for entry of single horses.

RULE 7. *Owner's Name and Address.* The post office address in full of the person or persons in whose name an entry is made, and if he or they be not the owner, then that of the owner or owners also, must accompany each nomination.

RULE 8. *Entries that Cannot Start.* As many horses may be entered by one owner, or as many horses trained in the same stable as may be desired, but only one that has been owned or controlled in whole or in part by the same person or persons, or trained in the same stable within ten days previous to the race, can start in any race of heats.

RULE 9. *No Purse for a "Walk Over."* No purse will be given for a "walk over," but in cases where only one of the horses entered for any premium shall appear on the course, he shall be entitled to his own entrance money and to one-half of the entrance money received from all other horses entered for said premium.

RULE 10. *In case of Death Engagements Void.* All engage-

ments are void upon the decease of either party or horse, so far as they shall affect the deceased party or horse; but forfeits or matches made play or pay, shall not be affected by the death of a horse.

RULE 11. *Match Races.* In all match races these rules shall govern, unless the contrary be expressly stipulated and assented to by the club, association, or proprietors of the course over which the race is to come off.

RULE 12. *When Matches become Play or Pay.* In all matches made to come off over any of these courses, the parties shall place the amount of the match in the hands of the stakeholder one day before the event (omitting Sunday) is to come off, at such time and place as the club, association or proprietor, upon application may determine, and the race shall then become play or pay.

RULE 13. *Purse or Stake Wrongfully Obtained.* A person obtaining a stake or purse through fraud, shall return it to the Treasurer upon demand within one year, or be punished as follows: He, together with all the parties interested, and the horse or horses, shall be expelled until such demand is complied with, and such stake or purse shall be awarded to the party justly entitled to the same.

RULE 14. *Fraudulent Entries, or Meddling with Horses.* Any person found guilty of dosing or tampering with any horse, or of making a fraudulent entry of any horse, or of disguising a horse with intent to conceal his identity, or being in any way concerned in such a transaction, shall be punished by the forfeiture of entrance money and expulsion; and any horse that shall have been painted or disguised, to represent another or a different horse, or shall have been entered in a purse in which he does not belong, shall be expelled.

RULE 15. *Reward.* A reward of $50 will be paid to the person who shall first give information leading to the detection and conviction of any fraudulent entry and the parties thereto, to be paid out of the funds of the National Association for the Promotion of the Interests of the American Trot-

ting Turf, by the Treasurer, upon the decision and order of the Board of Appeals; *provided*, that this shall not be construed to extend to courses outside of this Association.

RULE 16. *Protests.* Protests may be made verbally before or during a race, and shall be reduced to writing, and shall contain at least one specific charge, and a statement of the evidence upon which it is based, and shall be filed with the Judges, Association or Proprietor, before the close of the meeting. The Judges shall in every case of protest demand that the rider or driver and the owner or owners, if present, shall immediately testify under oath, in the manner hereinafter provided; and in case of their refusal to do so, the horse shall not be allowed thereupon to start or continue in that race, but shall be considered and declared ruled out, with forfeit of entrance money.

But if they do comply and take the oath, as herein required, unless the Judges find evidence to warrant excluding the horse, they shall allow him to start, or continue in the race, under protest, and the premium, if any is won by that horse, shall be retained a sufficient length of time (say three weeks,) to allow the parties interested a chance to sustain the allegations of the protest, and all outside bets on such horse shall be held in abeyance pending the decision of such protest, and the Judges shall waive the application of a distance as to all other horses in any heat which such protested horse shall win. And when a protest is presented, before or during a race, and the parties refuse to make the prescribed oath, if the Judges believe the refusal is designed to favor a fraud, they may require the horse, under protest, to start or continue in the race.

Any person found guilty of protesting a horse falsely and without cause, or merely with intent to embarrass a race, shall be punished by a fine not exceeding $100, or by suspension not to exceed one year, or by expulsion.

When a protest has been duly made, or any information lodged with the Judges in support of such a protest, alleging any improper entry or fraudulent act, such as shall be punishable under these rules, the same shall not be withdrawn or

surrendered before the expiration of three weeks, except upon the decision of the association or proprietor of the course upon which such protests or information was produced; and if any association or proprietor shall permit such a withdrawal of protest or information with a corrupt motive to favor any party who shall be affected by the same, the association or proprietor guilty of this impropriety, if convicted thereof by or before the Board of Appeals, shall be expelled from all connection with the National Association.

Association or proprietors shall be warranted in retaining the premium of any horse in the manner herein mentioned, if at any time before it is paid they shall receive information in their judgment tending to show fraud.

The oath required in answer to protest, shall be in the following form, to wit.:

I,..... ....., of.... ...., in the county of ....., State of ....., on oath depose and say, that I am the ..... of the ..... called ....., the same entered in a purse for horses that have never trotted better than..... minutes and..... seconds, to be trotted this day on this course, and the same that has been protested, and to which protest this affidavit is in answer, hereby declare and affirm that to the best of my knowledge and belief said beforementioned horse is eligible to start or compete in the race aforesaid, according to the rules of this course; and that I fully believe all the provisions and conditions required in the rules and regulations for the government of trials of speed over this course were fully and honestly complied with in making the entry aforesaid.

Given under my hand, at ....., this ..... day of....., A.D. 187..

.....

Subscribed and sworn to before me, this..... day of.....A. D. 187...

.....

Justice of the Peace.

[NOTE.—In the absence of a Justice of the Peace, if this oath be administered by an officer of the Association, or one

of the Judges of the race, it will be considered sufficient for the purposes of the National Association.]

RULE 17. *When Horses Shall Not be Drawn.* No person shall draw his horse after said horse has appeared on the track—saddled or harnessed—after having been summoned to prepare for the race, or during a race, except by permission of the Judges, under penalty of being expelled.

RULE 18. *Power of Postponement.* In case of unfavorable weather, or other unavoidable causes, each association or proprietor shall have power to postpone to a future time all purses or sweepstakes, or any race to which they have contributed money, upon giving notice thereof.

RULE 19. *No Trotting after Dark.* No heat shall be trotted when it is so dark that the horses cannot be plainly seen by the Judges from the stand, but all such races shall be continued by the Judges to the next fair day, omitting Sunday, at such hour as they shall designate.

In all matches and stakes, the above rule shall govern, unless otherwise especially agreed between the parties and the association or proprietors.

RULE 20. *Weights and Weighing.* Every horse starting for purse, sweepstakes, or match, in any trotting or pacing race, shall carry, if to wagon or sulky, 150 lbs., exclusive of harness; and if under the saddle, 145 lbs., the saddle and whip only to be weighed with the rider.

Riders and drivers shall weigh in the presence of one or more of the Judges previous to starting for any race, and, after each heat, shall come to the starting stand and not dismount or leave their vehicle without permission of the Judges, and those who are deficient in bodily weight shall be re-weighed after each heat. Any rider or driver not bringing in his required weight shall be distanced, unless such decision shall be deemed to favor a fraud. But a rider or driver thrown or taken by force from his horse or vehicle, after having passed the winning post, shall not be considered as having dismounted without permission of the Judges; and if disabled may be carried to the Judges' stand to be weighed,

and the Judges may take the circumstances into consideration, and decide accordingly. And the riders or drivers who shall carry during the race, and bring home with them, the weights which have been approved, or announced correct and proper by the Judges, shall be subject to no penalty for light weight in that heat, provided the Judges are satisfied the mistake or fault was their own, and that there has been no deception on the part of the rider or driver who shall be deficient in weight; but all parties thereafter shall carry the required weight.

RULE 21. *Handicaps and Miscellaneous Weights.* In matches or handicaps, where extra or lesser weights are to be carried, the Judges shall carefully examine and ascertain before starting, whether the riders, drivers or vehicles are of such weights as have been agreed upon or required by the match or handicap, and thereafter the riders and drivers shall be subject to the same penalties and conditions as if they were to carry the weights prescribed by the rules.

RULE 22. *When Riders and Drivers are Overweight.* If the bodily weight of any rider or driver shall be found to exceed that which is prescribed in the rules, or that which is required by the conditions of the race, and the overweight shall exceed twenty pounds, it shall be announced from the stand; and if not, the Judges shall have power, if, in their belief, such extra weight was imposed on the horse for an improper or fraudulent purpose, to substitute another rider or driver of suitable weight; and if they believe the horse has been prejudiced in the race by such overweight, he shall not be allowed to start again or continue in the race; and all outside bets on such horse shall be declared off. [See, also, Rule 28.]

A horse prevented by this rule from continuing in the race, shall not be distanced, but *ruled out.*

RULE 23. *Length of Whips.* Riders and drivers will be allowed whips not to exceed the following lengths: For saddle horses, 2 ft. 10 in.; sulkies, 4 ft. 8 in.; wagons, 5 ft. 10 in.; double teams, 8 ft. 6 in.; tandem teams and four-in-

hand, unlimited; snappers, not longer than three inches, will be allowed, in addition to the foregoing measurement.

RULE 24. *Judges' Stand.* None but the Judges of the race in progress, and their assistants, shall be allowed in the Judges stand during the pendency of a heat, except members of the Board of Appeals.

RULE 25. *Selection of Judges.* [See, also, Art. 13 of By-Laws.] In every exhibition or race, over any course represented in said National Association, each course for itself, through the proprietor or association controlling the same, shall choose or authorize the selection of three (3) competent Judges, for the day or race, who shall understand the rules of said National Association, and shall rigidly enforce the same; and all their decisions shall be subject to and in conformity with said rules. Any person having any interest in, or any bet dependent upon the result of a race, or having any interest in either of the horses engaged therein, shall thereby be disqualified and restricted from acting as a Judge in that race. And if any person who is thus disqualified shall intentionally and deceptively violate this restriction, he shall, upon conviction thereof by or before the Board of Appeals, be adjudged guilty of a dishonorable act, for which he shall be expelled from every course represented in said National Association.

RULE 26. *Authority of Judges.* The Judges of the day or race shall have authority, while presiding, to appoint distance and patrol Judges and Timers, to inflict fines and penalties, as prescribed by these rules; to determine all questions of fact in any way relating to the race over which they preside; to decide respecting any matters of difference between parties to a race, or any contingent matter which shall arise, such as are not specifically provided for in these rules; but all their decisions shall be in strict conformity with these rules, or with the principles thereof.

They shall have entire control over the horses about to start, and the riders or drivers and assistants of the horses,

and authority to punish by a fine not exceeding $100, or by suspension or expulsion, any such person who shall refuse to obey their orders.

RULE 27. *Distance and Patrol Judges.* In all races of heats there shall be a distance Judge appointed by the Judges of the race, or by those in authority, who shall remain in the distance stand during the heats, and immediately after each heat shall repair to the Judges' stand, and report to the Judges the horse or horses that are distanced, and any act of foul or improper conduct, if any has occurred under his observation.

Patrol Judges may be similarly appointed, and it shall be their duty to repair in like manner to the Judges' stand, and report any act of foul or improper conduct, if any has occurred under their observation.

RULE 28. *Powers and Duties of Judges.* The Judges shall be in the stand fifteen minutes before the time for starting the race; they shall weigh the riders or drivers, and determine the positions of the horses, and inform each rider or driver of his place before starting; they may require the riders and drivers to be properly dressed; they shall be prepared to take the time of each heat in the race, and they may appoint some suitable person or persons to assist them in that respect; and the time so taken shall be recorded and announced in conformity with these rules. [See, also, Rules 30 and 40, and Art. 13 of By-Laws.] The Judges shall ring the bell, or give other notice ten minutes previous to the time announced for the race to come off, which shall be notice to all parties to prepare for the race at the appointed time, when all the horses must appear at the stand, ready for the race; and any rider or driver failing to obey this summons, may be punished by a fine not exceeding $100, or his horse may be ruled out by the Judges and considered drawn; [but in all stakes and matches a failure to appear promptly at the appointed time, shall render the delinquent party liable to forfeit.]

The result of a heat shall not be announced until the Judges are satisfied as to the weights of the riders or drivers,

and sufficient time has elapsed to receive the reports of the distance and patrol Judges. The Judges shall not notice nor consider complaints of foul from any person or persons, except the distance and patrol Judges appointed by themselves or by those in authority, and from owners, riders or drivers in the race.

If the Judges believe that a horse is being or has been "pulled," or has been ridden or driven in other respects improperly, with a design to prevent his winning a heat which he was evidently able to win, and that such act was done, on the part of the rider or driver, for the purpose of perpetrating or aiding a fraud, they may declare that heat void, and they shall have power to substitute a competent and reliable driver or rider for the remainder of the race; and if the result of the succeeding heat or heats shall confirm their belief, the rider or driver so removed shall be punished by suspension or expulsion. And, at the close of the race, if they are warranted, under the foregoing circumstances, in deciding that such fraudulent conduct has changed the result of the race to the prejudice of innocent parties, they shall declare all outside bets "off,"; and if the owner or person or persons controlling the offending horse shall be a party or parties to such fraud, he or they shall be punished by expulsion. [See, also, Rules 22 and 48.]

RULE 29. *Starting and Keeping Positions.* No rider or driver shall cause unnecessary delay after the horses are called up, either by neglecting to prepare for the race in time, or by failing to come for the word, or otherwise; and in scoring, if the word is not given, all the horses in the race shall immediately turn, at the tap of the bell or other signal given, and jog back for a fresh start.

When the Judges are prevented from giving a fair start by a horse or horses persistently scoring ahead of others, or being refractory, or from any other fault of either horse, rider or driver, they may, after a reasonable time, give the word without reference to the position of the faulty horse or party, or they may give the faulty ones any position they think proper to facilitate the start.

If these requirements are not complied with on the part of any rider or driver, the Judges may not only start the race, or give the word without regard to the absence or position of the offending party or parties, but the offender may be punished by a fine not exceeding $100, or by suspension not to exceed one year.

In all cases the word shall be given from the Judges' stand, and in no instance shall a standing start be given.

When, through any fault of either horse, rider or driver, the Judges are prevented from giving a fair and prompt start, they shall warn the faulty party of the penalties to which they are subject, and if such warning is not heeded, they shall rigidly enforce said penalties.

The horse winning a heat shall take the pole (or inside position) the succeeding heat, and all others shall take their positions in the order in which they came home in the last heat. When two or more horses shall make a dead heat, the horses shall start for the' succeeding heat in the same, positions they occupied at the finish of the dead heat. In coming out on the home stretch, the foremost horse or horses shall keep the positions first selected, or be liable to be distanced; and the hindmost horse or horses, when there is sufficient room to pass on the inside or anywhere on the home stretch, without interfering with others, shall be allowed to do so, and any party interfering to prevent him or them shall be distanced. If a horse, in attempting to pass another on the home stretch, should at any time cross or swerve, so as to impede the progress of a horse behind him, he shall not be entitled to win that heat.

Although a leading horse is entitled to any part of the track, except after selecting his position on the home stretch, he shall not change from the right to the left, or from the inner to the outer side of the track during any part of the race, when another horse is so near him that, in altering his position, he compels the horse behind him to shorten his stride, or causes the rider or driver of such other horse to pull him out of his stride; neither shall any horse, rider or driver, cross, jostle, or strike another horse, rider

or driver, nor swerve or do any other thing that impedes the progress of another horse; nor shall any horse, in passing a leading horse, take the track of the other horse so soon after getting the lead as to cause the horse passed to shorten his stride.

In any heat, wherein there shall be a violation of any of these restrictions, the offending horse shall not be entitled to win the heat, and he shall be placed behind all other horses in that heat. And if the impropriety was intentional on the part of the rider or driver, the offending horse may be distanced, and the rider or driver shall be suspended or expelled. [See, also, Rule 48.]

RULE 30. *Horses Breaking.* When any horse or horses break from their gait in trotting or pacing, their riders or drivers shall at once pull them to the gait in which they were to go the race, and any party refusing or failing to comply with this requirement, if he come out ahead, shall lose the heat, and the next best horse shall win the heat, and whether the breaking horse come out ahead or not, all other horses shall be placed ahead of him in that heat, and the Judges shall have discretionary power to distance the offending horse or horses, and the rider or driver may be punished by a fine not to exceed $100, or by suspension not exceeding one year. Should the rider or driver comply with this requirement, and the horse should gain by a break, twice the distance so gained shall be taken from him at the coming out; but this provision must not be so construed as to shield any trotting or pacing horse from punishment for running. In case of any such horse repeatedly breaking, or running or pacing while another horse is trotting, or so continuing in a run or pace, as to violate the first requirement in this rule, the Judges shall punish the horse so breaking, running or pacing, by placing him last in the heat, or by distancing him. A horse breaking at or near the score shall be subject to the same penalty as if he broke on any other part of the track.

RULE 31. *Relative to Heats and Horses Eligible to Start.*

In heats, one, two, three or four miles, a horse not winning one heat in three, shall not start for a fourth, unless such horse shall have made a dead heat. In heats best three in five, a horse not winning a heat in five shall not start for a sixth, unless said horse shall have made a dead heat. But where ten or more horses start in a race, every horse not distanced shall have the right to compete until the race is completed; subject, however, to all other penalties in these rules.

RULE 32. *Dead Heats.* A dead heat shall be counted in the race, and shall be considered a heat which is won by the horses making it, but undecided between them, and it shall be considered a heat that is lost by all the other horses contending therein; and the time made in a dead heat shall constitute a record for each horse making such dead heat; and only those horses shall start for the next heat that would have been entitled had the heat been won by either horse making the dead heat. A horse prevented from starting by this rule shall not be distanced, but ruled out.

RULE 33. *Time Between Heats.* The time between heats shall be twenty minutes for mile heats; and for mile heats, best 3 in 5, twenty-five minutes; and for two mile heats, thirty minutes; for three mile heats, thirty-five minutes; and should there be a race of four mile heats, the time shall be forty minutes.

After the first heat the horses shall be called five minutes prior to the time of starting.

RULE 34. *Time Allowed in Case of Accidents.* In case of accidents, ten minutes shall be allowed, but the Judges may allow more time when deemed necessary and proper.

RULE 35. *Fraudulent Collision and Break Down.* In case of collision and breakdown, the party causing the same, whether wilfully or otherwise, shall be distanced; and if the Judges find it was occasioned designedly, and to aid fraud, the driver in fault shall be forthwith suspended or expelled, and his horse shall be distanced; but if necessary to defeat fraud, the Judges may direct the offending horse to start again.

No horse but the offending one shall be distanced in such a heat, except for foul driving. The Judges in a concluding heat, finding that a collision involved a fraudulent object, may declare that heat void. [See, also, Rule 48.]

Rule 36. *Placing Horses.* A horse must win a majority of the heats which are required by the conditions of the race to be entitled to the purse or stakes, unless such horse shall have distanced all competitors in one heat: but whenever a horse shall have distanced all competitors in one heat, the race is concluded, and the winner shall receive the entire purse and stakes.

When more than one horse remains in the race, entitled to be placed at the finish of the last heat, the second best horse shall receive the second premium, if there be any; and if there be any third or fourth premium, &c., for which no horse has won and maintained a specific place, the same shall go to the winner.

The foregoing provisions shall always apply, in such cases, unless otherwise stated in the published conditions of the race.

In deciding the rank of horses other than the winner, as to second, third and fourth places, &c., to be assigned among such as remain in the race, entitled to be placed at the conclusion of the last heat thereof, the several positions which have been assigned to each horse so contending shall be considered as to every heat in the race—that is, horses having won two heats better than those winning one; a horse that has won a heat better than a horse only making a dead heat; a horse winning one or two heats and making a dead heat better than one winning an equal number of heats, but not making a dead heat; a horse winning a heat or making a dead heat, and not distanced in the race, better than a horse that has not won a heat or made a dead heat; a horse that has been placed "second" twice, better than a horse that has been placed "second" only once, etc.

When two or more horses shall be equal in the race at the commencement of a final heat thereof, they shall rank as to each other as they are placed in the decision of such final heat.

In case these provisions shall not give a specific decision as to second and third money, etc., the Judges of the race are to make the awards according to their best judgment, but in conformity with the principles of this rule.

RULE 37. *Distances.* In races of mile heats 80 yards shall be a distance. In races of two mile heats 150 yards shall be a distance. In races of three mile heats 220 yards shall be a distance. In races of mile heats best 3 in 5, 100 yards shall be a distance. But if any Association or Proprietor shall choose, they can provide, in heats of not over one mile, wherein eight or more horses contend, to increase the distance one half, in which case such change shall be stated in the published conditions of the race, before entry.

All horses whose heads have not reached the distance stand as soon as the leading horse arrives at the winning post, shall be declared distanced, except in cases otherwise provided for, or the punishment of the leading horse by setting him back for running, when it shall be left to the discretion of the Judges.

A distanced horse is out of the race, and if in any heat one horse shall distance all competitors, the race will then be completed, and the winner shall be entitled to the entire purse and stakes, unless otherwise stipulated in the published conditions of the race.

RULE 38. *Rank between Distanced Horses.* Horses distanced in the first heat of a race shall be equal; but horses that are distanced in any subsequent heat shall rank as to each other in the order of the positions to which they were entitled at the start of the heat in which they are distanced.

RULE 39. *Time and its Record.* In every public race the time of each heat shall be accurately taken and placed in the recod; and, upon the decision of each heat, the time thereof shall be publicly announced by the Judges, except as provided in these rules concerning those heats which are "taken away from leading horses."

It shall be the duty of the Judges of the race to take the

time as aforesaid, or to appoint some suitable person or persons to assist them in that respect; and no unofficial timing shall be recognized or admitted to the record. [See, also, Rule 40.]

RULE 40. *Two Leading Horses to be Separately Timed.* The two leading horses shall be separately timed, and if the heat is awarded to either, his time only shall be announced and be a record. In case of a dead heat, the time shall constitute a record for the horses making the dead heat; and if for any other cause the heat is not awarded to either of the leading horses, it shall be awarded to the next best horse, and no time shall be given out by the Judges or recorded against either horse; and the Judges may waive the application of the rule in regard to distance in that heat, except for foul riding or driving.

RULE 41. *Fraudulent Suppression of Time.* In any public race, if there shall be any intentional suppression or misrepresentation in either the record or the announcement of the time of any heat in the race, procured through any collusive arrangement between the Judges or Timers and the owner or the winning horse or his driver or other authorized agent, it shall be fraudulent. And any horse winning a heat or making a dead heat wherein there was such a fraudulent suppression of time, together with the parties implicated in the fraud, shall be expelled.

RULE 42. *A Public Race.* Any contest for purse, premium, stake or wager, on any course and in the presence of a Judge or Judges, shall constitute a public race.

RULE 43. *When Time Becomes a Bar.* Time made in single or double harness at fairs and on any track, whether short or not, shall constitute a bar; but time made under the saddle shall not be a bar in harness or wagon races.

RULE 44. *Time of "Trotting Horse with a Running Mate," no Bar.* A race wherein a trotting horse goes with a running mate, shall not create a record for time as a trotting performance.

RULE 45. *Complaints by Riders or Drivers.* All com-

plaints by riders or drivers, of any foul riding or driving, or other misconduct, must be made at the termination of the heat, and before the rider or driver dismounts or leaves his vehicle by permission of the Judges.

RULE 46. *Decorum.* If any owner, trainer, rider, driver, or attendant of a horse, or any other person, use improper language to the officers of the course, or the Judges in a race, or be guilty of any improper conduct, the person or persons so offending shall be punished by a fine not exceeding $ 100, or by suspension or expulsion. [See, also, Rule 48.]

RULE 47. *Loud Shouting.* Any rider or driver guilty of loud shouting, or of making other unnecessary noise, or of making improper use of the whip, during the pendency of a heat, shall be punished by a fine not to exceed $ 25, or by suspension during the meeting.

RULE 48. *Fouls.* If any act or thing shall be done by any owner, rider or driver, or their horse or horses, during any race, or in connection therewith, which these rules define or warrant the Judges in deciding to be foul; and if no special provision is made in these rules to meet the case, the Judges shall have power to punish the offender by fine not to exceed $ 100, or by suspension or expulsion. And in any case of foul riding or driving, they shall distance the offending horse, unless they believe such a decision will favor a fraud. The term "foul" shall be construed to apply to riding or driving contrary to rule, or to any act of a fraudulent nature, and to any unprincipled conduct, such as tends to debase the character of the trotting turf in the estimation of the public.—(See, also, Rules 28, 29, 35, 46 and 47.]

RULE 49. *Fines.* All persons who shall have been fined under these rules, unless they pay the fines imposed, in full, on the day of assessment, shall be suspended until they are so paid or deposited with the Treasurer of said National Association.

All fines which shall be paid to the association or proprietor, on whose grounds they were imposed, shall by them be paid to the Treasurer of the National Association upon demand.

RULE 50. *No Compromise of Penalties.* In no case shall there be any compromise in the manner of punishment where the rules express or provide what the penalty shall be, but the same shall be strictly enforced.

RULE 51. *Suspensions and Expulsions.* Whenever the words suspended or suspension occur in these rules, if applied to a horse, they shall be construed to mean a disqualification during the time of suspension, to enter or compete in any race to be performed on the course of the association or proprietor; and if applied to a person, they shall be construed to mean a conditional withholding of all right or privilege to make an entry, or to ride, drive, train or assist on the course and grounds of the association or proprietor. If no limit is fixed in an order of suspenion, and none is prescribed in the rule applicable to the case, the punishment shall be considered as limited to the season in which the order was issued.

Wherever the words expelled or expulsion occur in these rules, they shall be construed to mean unconditional expulsion and disqualification from any participation in the privileges and uses of the course and grounds of the association or proprietor, And no penalty of expulsion shall be removed or modified, except by the order or upon the approval of the Board of Appeals.

Whenever the penalty of suspension or expulsion has been imposed on any horse or person on the grounds of any association or proprietor holding membership in said National Association, written or printed notice thereof shall immediately be forwarded to the Secretary of said National Association, stating the offence and the character of punishment, who shall at once transmit the information to each associated course or member; and thereupon the offender thus punished shall suffer the same penalty and disqualification with each association and proprietor holding membership in said National Association.

RULE 52. *Right of Appeal.* Any person who has been subjected to either of the penalties of suspension, expulsion, or a fine, by the decision of the Judges of a race, can appeal

from such decision to the association or proprietor, upon whose grounds the penalty was imposed, and from their decision can appeal to the Board of Appeals; *provided*, that where the penalty was a fine, it shall have been previously paid. And all decisions and rulings of the Judges of any race, and of the several associations and proprietors belonging to said National Association, may be appealed to the Board of Appeals, and shall be subject to review by said board, upon facts and questions involving the proper interpretation and application of these rules, and their decisions shall be final; *provided* that parties to be affected thereby, shall be notified as the board shall direct, of a time and a place when such appeal will be acted on by the Board.

Provided further, if the appeal relate to the decision of a race, immediate notice shall have been given to the Judges of the race of the intention so to appeal. All other appeals must be taken within one week from the announcement of the decisions appealed. Any person who shall appeal from any order suspending him or his horse for non-payment of entrance money or a fine, may deposit the amount claimed with the Treasurer of said National Association, who may thereupon issue a certificate or notice, temporarily re-instating or relieving the party and his horse from such penalty; subject to the final action of the Board of Appeals.

RULE 53. *Age of a horse—how reckoned.* The age of a horse shall be reckoned from the first day of January preceding the period of foaling.

RULE 54. *Colts and Fillies equally Eligible to Enter.* All colts and fillies shall be eligible alike to all premiums and stakes for animals of their age, unless specially excluded by the conditions imposed.

RULE 55. *A Green Horse.* A green horse is one that has never trotted or paced for premiums or money, either double or single.

RULE 56. *Races made and "No Hour Named."* All races shall be started at 3 o'clock, P. M., from the 1st day of April to the 15th day of September, and after that date at 2 o'clock,

P. M. until the season closes, unless otherwise provided.

RULE 57. *Race made and no Distance Specified.* When a race is made and no distance specified, it shall be restricted to the following distances, viz.: one mile and repeat; mile heats, best 3 in 5; 2 miles and repeat, or 3 miles and repeat, and may be performed in harness, to wagon, or under the saddle.

RULE 58. *Race made to "go as they please."* When a race is made to go as they please, it shall be construed that the performance shall be in harness, to wagon, or under the saddle; but after the race is commenced no change shall be made in the mode of going.

RULE 59. *Race made to "go in Harness."* When a race is made to go in harness it shall be construed to mean that the performance shall be to a sulky.

RULE 60. *Matches made against Time.* When a horse is matched against time it shall be proper to allow any other horse to accompany him in the performance, but not to be harnessed with or in any way attached to him.

In matches made against time, the parties making the match shall be entitled to three trials, unless expressly stipulated to the contrary, which trials shall be had on the same day—the time between trials to be the same as the time between heats in similar distances.

RULE 61. *Horses sold with Engagements.* The seller of a horse sold with his engagements has not the power of striking him out. In case of private sale, the written acknowledgment of the parties that the horse was sold with engagements is necessary to entitle the buyer to the benefit of this.

A true copy from the record,

Attest—

GEORGE SMITH,
Secretary.

BETTING RULES.

By vote of the National Association, at the Annual Meeting held at Buffalo, New York, on the first Wednesday of February, 1871, a special committee was appointed to revise the BETTING RULES, and said committee having reported the following rules, they are accordingly adopted to control all pools and bets laid upon any trotting or pacing event which shall be subject to the government of the rules of said National Association.

No. 1. All pools and bets must follow the main stakes, purse or other prize, as awarded by the decision of the Judges, except in cases where the horse that comes in first is found to be disqualified, or the bets are declared off for fraud or collusion.

No. 2. If a race is postponed, it shall not affect the pools or bets that may have been made on it. They shall stand until the race comes off, unless the contrary shall be agreed on between the parties betting; provided the race takes place within five days of the time first named; after which time all bets and pools are drawn, unless made play or pay.

No. 3. When any change is made in the conditions of a race, all pools and bets made previous to the announcement of the change shall be null and void.

No. 4. When a bet is made on one horse against the field, he must start or the bet is off, and the field is what starts against him; but there is no field, unless one start against him.

No. 5. In pools and betting, the pool stands good for all the horses that start in the race; but for those horses that do not start, the money must be returned to the purchaser.

No. 6. In races made play or pay, outside bets are not play or pay unless so made by the parties.

No. 7. All bets are void on the decease of either party,

but in case a horse should die, play or pay bets made on him stand.

No. 8. If a bet is made on any number of straight heats, and there is a dead heat made, the heats are not straight, and the party betting on straight heats loses.

No. 9. If in any case the Judges declare a heat null and void, it does not affect the bets as in case of a dead heat as to winning in straight heats.

No. 10, When a race is coming off, and a party bets that a heat will be made in two minutes and thirty seconds, (2,30), and they make two thirty (2,30), or less, he would win. If he bets they will beat two minutes and thirty seconds, (2,30), and they make exactly two thirty, (2,30), he loses; but if he takes two minutes and thirty seconds (2,30) against the field, and they make exactly two thirty (2,30), it is a tie, or drawn bet. All time-bets to be decided accordingly.

No. 11. In a double event—where there is no action on the first race in order, in consequence of forfeit or other cause, the bet is off; but where there is an action on the bet, and the party betting on the double event shall have won the first, the bet shall then stand as a play or pay bet for the second event.

No. 12. If a bet should be made during the contest of a heat, that a named horse will win that heat, and he makes a dead heat, the bet is drawn: but if after the horses have passed the score, the party bets that a certain named horse has won the heat, and the Judges declare it a dead heat, the backer of the named horse loses.

No. 13. In races between two or more horses, of a single dash at any distance, which result is a dead heat, it is a draw between the horses making the dead heat, and bets between them are off; and if it is a sweepstakes, the money of the beaten horse is to be divided between the horses making the dead heat.

No. 14. When a better undertakes to place the horses in a race, he must give a specified place, as first, second, third, and so on. The word "last" shall not be construed to mean

"fourth and distanced," if four start, but "fourth" only and so on. A distanced horse must be placed "distanced."

No. 15. Horses shall be placed in a race, and bets decided as they are placed in the official record of the day; provided that where a horse comes in first, and it is afterwards found that he was disqualified for fraud, the bets on him shall be null and void, but pool sellers and stake holders shall not be responsible for moneys paid by them under the decision of the judges of the race. [See article 13 of By-Laws.]

No. 16. Bets made during a heat are not determined until the conclusion of the race, if the heat is not mentioned at the time.

No. 17. Either of the bettors may demand stakes to be made, and on refusal, declare the bet to be void.

No. 18. Outside bets cannot be declared off on the course unless that place was named for staking the money, and then it must be done by filing such declaration in writing with the Judges, who shall read it from the stand before the race commences.

No. 19. Bets agreed to be paid or received, or bets agreed to be made or put up elsewhere than at the place of the race, or any other specified place, cannot be declared off on the Course.

No. 20. Bets on horses disqualified and not allowed to start are void, unless the bets are play or pay.

No. 21. A bet cannot be transferred without the consent of parties to it, except in pools.

No. 22. When a bet is made on a horse's time, it shall be decided by the time made in a public race ; he going single and carrying his proper weight.

No. 23. When a horse makes time on a short track, it shall not constitute a record for the decision of bets.

No. 24. Horses that are distanced or drawn at the conclusion of a heat are beaten in the race by those that start afterward. A horse that is distanced in a heat is beaten by one drawn at the termination of the same heat.

No. 25. When a man lays odds, and intends to take the field against a single horse, he must say so, and the other party will choose his horse. When a man undertakes to name the winner, whether he bets odds or taks odds, he must name some one horse.

No. 26. All bets relate to the purse, stake or match, if nothing to the contrary is specified at the time of making the bet.

No. 27. Parties wishing all the horses to start for a bet, must so name it at the time the bet is made.

No. 28. When the judges declare a heat null and void, all bets on that heat shall stand for decision on the next heat.

No. 29. All pools and bets shall be governed and decided by these rules, unless a stipulation to the contrary shall be agreed upon by the parties betting.

No. 30. Should any contingencies occur not provided for by these rules, the Judges of the day shall decide them.

No. 31. When a horse which has not been sold in the pools wins the race, the best horse sold in the pools wins the money.

A true copy from the record.

Attest—

GEORGE SMITH,
Secretary.

GENERAL HINTS.

Match horses with reference to size and motion particularly; to color if you can, and have other requisites.

Always have inside lines on double teams quite long, and back-strap short.

Never *check* a horse if you wish to have him last long, except while training.

Feed in *low* mangers; *water* and *oats* to be given *first*; hay afterward.

If worked, very little water to be given in the night.

Stop at the *top* of a hill and let your horse get breath.

The shoe should fit the foot, not the foot the shoe. Never cut the bars or frogs.

Wet the *hay*, and *not* the oats for a coughing horse.

Never let a horse stand long facing a cold wind.

Feed lightly when changing feed.

When training in a building, have carriages, etc., removed.

Always approach a strange horse near the shoulder.

Use but a few words with a horse, but have them understood.

Be earnest and prompt, but not harsh.

Teach before whipping, and when whipping, do it to frighten, not to enrage.

Never jump from a wagon when your horse is running away. More lives and limbs are lost in that way than by remaining in the wagon.

Exercise sound judgment by purchasing a horse suited to the business required of him. Some horses are good saddle-horses, but might not make good cart-horses.

If a horse cribs, drive a few three-ounce tacks through the throat-latch of the halter, so that the points are inward toward the neck, when the throat-latch is buckled moderately tight. As he attempts to crib, the swell of the neck causes him to be pricked, which admonishes him to quit.

Trotters go in all forms as well as runners.

Have your harness fit your horse. The greatest care should be observed that every strap should be in the right place, and every billet buckled in the right hole. When on, the whole suit to fit like a glove, without confining the animal by pressure; the bit drawn close in the angles of the mouth; the blinds to have the right set; the breast-collar to come above the point of the shoulder, without encroaching on the wind-pipe; the back pad where the withers and swelling of the ribs make it sit easily; the breeching on a level with the stifle; the martingal long.

TURF CALENDAR.

Flora Temple, the fastest trotting horse in the world, was sired by *One-Eyed Hunter;* the pedigree of her dam is not known. Flora is now twenty years old, (1865); is owned by A. Welch, Esq., of Chesnut Hills, Philadelphia; her best time was made at Kalamazoo, October 15th, 1859, a full mile in 2 min. 19¾ sec., which is the best time ever made by a trotting horse. She beat George M. Patchen on the Union Course in 2:21; she beat Ethan Allen and mate in 2:20½.

George M. Patchen trotted under the saddle, on Union Course, Nov. 21, 1859, in 2:24.

Brown Dick beat Patchen in 2-25¼.

Ethan Allen's best time, single, was 2:25½; trotted with a running mate, Sept 5, 1861, on Fashion Course, in 2:19¾,

The fastest time on record for a three years old, was made by Cora, in 2:37¾.

Gen. Butler's best time was 2:21. Dexter beat him three straight heats, on the Fashion Course, Sept. 7, 1865: 2:26½, 2:24½, 2:22½

Toronto Chief beat Vanderbilt on the Fashion Course, Sept. 9, 1865, in 2:23, 2:27, 2:27¾. Vanderbilt trotted one heat in 2:27¾.

The fastest running time on record, for a single mile, was made at Cincinnati by *Legal Tender* in 1 min. 44 sec. The best time ever made in England is 1:39, made by

Gladiator. It is said that *Bay Middleton* ran the same mile in 1:30, but there is no record of such time.

Brown Dick made the best time for three mile heats, in 5:28.

Pocahontas paced a full mile in 2:17½, which is the best time on record.

The greatest performance in double harness, on record, a 2:12 gait to road wagon. Lady Palmer and Flatbush Mare, driven by their owner, Mr. Bonner, taken out of his stable untrained, to a road wagon, in public, May 10th, 1862, one mile in 2:26; May 13th, two miles in 5.01½; the second quarter of the second mile in 33 seconds being a 2:12 gait to a road wagon.

Since the writing of this book, Flora Temple's time has been beaten. Dexter in his great match against time on the Fashion Course, Oct. 10, 1865, trotted a mile under saddle in the unparalleled time of 2:18 1-5.

Twenty Miles Within the Hour — Trustee, Union Course Oct. 20, 1848, in 59:35½. Lady Fulton, Centreville Course, July 12, 1855, 59-55. Captain Mc Gowan, Riverside Course, Boston, Oct. 31, 1865, 58:25. Dexter beat Flora Temple's best time in harness, July 30, 1867, at Boston, in 2:19. Lady Suffolk's best time for one mile, harness, 2:26. Lancet's best time saddle, 2:25½.

In order to form an idea of Dexter's superiority over all other trotting horses, it is only necessary to state that during Flora Temple's entire career on the turf, she trotted only four or five heats in less than 2:22, while Dexter has trotted in less than two years, twenty-seven heats in 2:22, or quicker. The horse that has ranked next to Dexter on the turf during the past two years is Lady Thorn, and she has never made even one heat in 2:22, while Dexter

has trotted as horsemen say, "away down" in 2:17½. Dexter is fifteen hands, one inch high, and was nine years old in the spring of 1867.

In color he has a rich glossy brown, blazed-faced, with four white feet, the white running well up the legs. His head, though somewhat large, is clean and bony; lower jaw well open at the base, leaving plenty of room for the windpipe ; ears tapering and lively; eyes bright and prominent; head well set on a rather light neck, which is well fitted to fine sloping shoulders; withers high, with great depth of brisket, and a good barrel; back slightly arched, with broad loin and hips and drooping rump; uncommonly long from point of the hip to hock; short cannon bone; mane and tail sufficiently full to develop his Hambletonian origin.

Ethan Allen and "running mate," in double harness, on Fashion Course, Friday, June 21, 1867, beat Dexter in harness in the unprecedented time of 2:15, 2:16, 2:19. Dexter's time, as taken by excellent men, was reported 2:17, 2:18, 2:21, but not reliable for bets. The fastest time on record, for four years' old, was made by Bruno in 2:30.

Kentucky Prince trotted ten miles in 28:8½.

STABLE MANAGEMENT.

This is a very important part of our subject, even as a it regards the farmer, although there are comparatively few glaring errors in the treatment of the agricultural horse; but it comes more especially home to the gentleman, who is too often, and too implicitly, under the guidance of an idle, ignorant and designing groom. We will arange the most important points of general management under the following heads.

AIR.

The breathing of pure air is necessary to the existence and health of man and beast. It is comparatively lately that this has been admitted even in the management of our best stables. They have been close, hot, and foul, instead of airy, cool and wholesome. The stable should be as large compared with the number of horses that it is destined to contain, as circumstances will allow. A stable for six horses should not be less than thirty feet in length, and thirty feet wide. If there is no loft above, the inside of the roof should always be plastered in order to prevent direct currents of air and occasional droppings from broken tiles. The heated and foul air should escape, and cool, pure air be admitted, by elevation of the central tiles, or by large tubes carried through the roof, with caps a little above them, to prevent the beating in of the rain, or by grating placed high up in the walls. These latter apertures should be as far above the horses as they can

conveniently be placed, by which means all injurious draughts will be prevented. If there is a loft above the stable the ceiling should be plastered, in order to prevent the foul air from penetrating to the hay above, and injuring both its taste and its wholesomeness; and no opening should be allowed above the manger through which the hay may be thrown into them; for they will permit the foul air to ascend to the provender, and also in the act of filling the mangers, and while the horse is eagerly gazing upward for his food a grass seed may fall into the eye and produce considerable inflammation. At other times, when the careless groom has left open the trap-door, a cold stream of air beats down on the head of the horse. The stable with a loft over it should never be less than twelve feet high, and proper ventilation should be secured, either by tubes carried through the roof, or by gratings close to the ceiling. These gratings, or openings should be enlarged or contracted by means of a covering or shutting, so that spring, summer and autumn the stable may possess nearly the same temperature with the open air, and in winter a temperature of not more than ten degrees above that of the external atmosphere. A hot stable has, in the mind of the groom, been connected with a glossy coat. The latter, it is thought, cannot be obtained without the former. To this we reply, that in winter a thin glossy coat is not very desirable. Nature gives to every animal a warmer clothing when the cold weather approaches. The horse, the agricultural horse especially, acquires a thicker and lengthened coat, in order to defend him from the surrounding cold. Man puts on an additional and a warmer covering, and his comfort is increased and his health improved by it. He who knows anything of the farmer's horse, or

cares about his enjoyment, will not object to a coat a little longer, and a little roughened when the wintry wind blows bleak. The coat, however, not to be so long as to be unsightly, and warm clothing even in a cool stable, will with plenty of honest grooming, keep the hair sufficiently smooth and glossy to satisfy the most fastidious.

The over-heated air of a close stable saves much of this grooming, and therefore the idle attendant unscrupulously sacrifices the health and safety of the horse. When we have presently to treat of the hair and skin of the horse, this will be placed in a somewhat different point of view. If the stable is close, the air will not only be hot, but foul. The breathing of every animal contaminates; and when in, the course of the night, with every aperture stopped, it passes again and again through the lungs, the blood cannot undergo its proper and healthy change; digestion will not be so perfectly performed, and all the functions of life are injured. Let the owner of a valuable horse think of his passing twenty or twenty-two out of twenty-four hours in this debilitating atmosphere. Nature does wonders in enabling every animal to accommodate itself to the situation in which it is placed, and the horse that lives in the stable, even suffers less from it than would scarcely be conceived possible; but he does not and cannot possess the power and hardihood which he would acquire under other circumstances. This air of the improperly close and heated stable is still further contaminated by the urine and dung, which rapidly ferment there, and give out stimulating and unwholesome vapors. When a person first enters an ill-managed stable, and especially early in the morning, he is annoyed not only by the heat of the confined air, but by a pungent smell, re-

sembling hartshorn: and can he be surprised at the inflammation of the eyes, and the chronic cough, and the disease of the lungs, by which the animal who has been all night shut up in this wretched atmosphere, is often attacked; or if the glanders and farcy should occasionally break out in such stables? It has been ascertained by chemical experiment that the urine of the horse contains in it an exceedingly large quantity of hartshorn; and not only so, but that, influenced by the heat of a crowded stable, and possibly by other decompositions that are going forward at the same time, this ammoniacal vapor begins to be rapidly given out, almost immediately after the urine is voided. When disease begins to appear among the inhabitants of these ill-ventilated places, is it wonderful that it should rapidly spread among them, and that the plague-spot should be, as it were, placed on the door of such a stable? When distemper appears in spring or autumn, it is in very many cases to be traced to such a pest-house. It is peculiarly fatal there. The horses belonging to a small establishment, rationally treated, have it comparatively seldom, or have it lightly; but among the inmates of a crowded stable it is sure to display itself, and there it is most fatal. The experience of every veterinary surgeon, and of every large proprietor of horses, will corroborate this statement. Every stable should possess within itself a certain degree of ventilation. The cost of this would be trifling, and its saving in the preservation of valuable animals may be immense. The apertures need not be large, and the whole may be so contrived that no direct current of air shall fall on the horse. A gentleman's stable should never be without a thermometer. The temperature should seldom exceed 70 degrees

in the summer, or sink below 40 or 50 degrees in the winter.

LITTER.

Having spoken of the vapor of hartshorn, which is so rapidly and so plentifully given out from the urine of the horse in a heated stable, we next take into consideration the subject of litter. The first caution is frequently to remove it. The early extraction of gas shows the rapid putrefaction of the urine, the consequence of which will be rapid putrefaction of the litter that has been moistened by it. Everything hastening to decomposition should be carefully removed where life and health are to be preserved. The litter that has been much wetted or at all softened by the urine, and is beginning to decay, should be swept away every morning; the greater part of the remainder may then be piled under the manger, a little being left to prevent the painful and injurious pressure of the feet on the hard floor during the day. The soiled and soaked portion of that which was left should be removed at night. In the better kind of stables, however, the stalls should be completely emptied every morning. No heap of fermenting dung should be suffered to remain during the day, in the corner, or in any part of the stable. With regard to this the directions of the master should be peremptory. The stable should be so contrived that the urine shall quickly run off and the offensive and injurious vapor from the decomposing fluid and the litter will thus be materially lessened; but if this is effected by means of gutters and a descending floor, the descent must be barely sufficient to cause the fluid to escape; as, if the toes are kept higher than the heels it will lead to lameness, and is also a frequent cause

of contraction of the foot. Stalls of this kind certainly do best for mares; but for horses we much prefer those with a grating in the center, and a slight inclination of the floor on every side, towards the middle, and a short branch may communicate with a larger drain, by means of which the urine may be carried off to a reservoir outside the stable. Traps are now contrived, and may be procured at a little expense, by means of which neither any offensive smell nor current of air can pass through the grating. Humanity and interest, as well as the appearance of the stable, should induce the proprietor of the horse to place a moderate quantity of litter under him during the day.

LIGHT.

This neglected branch of stable management is of far more consequence than is generally imagined; and it is particularly neglected by those for whom these treatises are principally designed. The farmer's stable is frequently destitute of any glazed window, and has only a shutter, which is raised in warm weather and closed when the weather becomes cold. When the horse is in the stable only during a few hours in the day, this is not of so much consequence, with regard to horses of slow work: but to carriage horses and hackneys, so far at least, as the eyes are concerned, a dark stable is little less injurious than a foul and heated one. In order to illustrate this reference may be made to the unpleasant feeling, and the utter impossibility of seeing distinctly, when a man suddenly emerges from a dark place into the full blaze of day. The sensation of mingled pain and giddiness is not soon forgotten; and some minutes pass before the eye can accommodate itself to the increased light. If this were to happen

every day, or several times in the day, the sight would be irreparably injured, or possibly blindness would ensue. Can we wonder, then, that the horse, taken from a dark stable into a glow of light, feeling, probably, as we should feel under similar circumstances, and unable for a considerable time to see anything around him distinctly, should become a starter, or that the frequently repeated violent effect of sudden light should induce inflammation of the eye so intense as to terminate in blindness? There is indeed, no doubt that horses kept in dark stables are, frequently notorious starters, and that abominable habit has been traced to this cause. If plenty of light is admitted, the walls of the stable, and especially that portion of them which is before the horse's head, must not be of too glaring a color. The color of the stable should depend on the quantity of light. Where much can be admitted, the walls should be of a gray hue; when darkness would otherwise prevail, frequent whitewashing may in some degree dissipate the gloom. For another reason, it will be evident that the stable should not possess too glaring a light; it is the resting place of the horse. The work of the farmer's horse, indeed, is confined principally to the day. The hour of exertion having passed, the animal returns to his stable to feed, and to repose, and the latter is as necessary as the former, in order to prepare him for renewed work. Something approaching to the dimness of twilight is requisite to induce the animal to compose himself to sleep. This half-light more particularly suits horses of heavy work. In the quietness of a dimly lighted stable, they obtain repose, and accumulate flesh and fat.

GROOMING.

Of this, much need not be said to the agriculturist,

since custom, and apparently without ill effect, has allotted so little of the comb and brush to the farmer's horse. The animal that is worked all day, and turned out at night, requires little more to be done to him than to have the dirt brushed off his limbs. Regular grooming, by rendering his skin more sensitive to the attraction of temperature, and the inclemency of the weather, would be prejudicial. The horse that is altogether turned out needs no grooming. The dandruff, or scurf, which accumulates at the roots of the hair, is a provision of nature to defend him from the wind and cold. It is to the stabled horse, highly fed and little or irregularly worked, that grooming is of so much consequence. Good rubbing with the brush and currycomb, opens the pores of the skin, circulates the blood to the extremities of the body, produces free and healthy perspiration and stands in the room of exercise. No horse will carry a fine coat without either unnatural heat or dressing. They both effect the same purpose; they both increase the insensible perspiration; but the first does it at the expense of health and strength, while the second, at the same time that it produces a glow on the skin, and a determination of blood to it rouses all the energies of the frame. It would be well for the proprietor of the horse if he were to insist and see that his orders are really obeyed, that the fine coat in which he and his groom so much delight is produced by hand rubbing and not by a heated stable and thick clothing, and most of all, not by stimulating or injurious spices. The horse should be regularly dressed every day, in addition to the grooming that is necessary after work.

When the weather will permit the horse to be taken out, he should never be groomed in the stable, unless he

is an animal of peculiar value, or placed for a time under peculiar circumstances. Without dwelling on the want of cleanliness, when the scurf and dust which are brushed from the horse, lodge in his manger, and mingle with his food, experience teaches, that if the cold is not too great, the animal is braced and invigorated to a degree that cannot be attained in the stable by being dressed in the open air. There is no necessity, however, for half the punishment which many a groom inflicts upon the horse in the act of dressing; and particularly on one whose skin is thin and sensitive. The curry-comb should at all times be lightly applied. With many horses its use may be almost dispensed with; and even the brush need not be used very hard, nor the points of the bristles so irregular, as they often are. A soft brush, with a little more weight of the hand, will be equally effectual, and a good deal more pleasant to the horse. A hair cloth, while it will seldom irritate and tease, will be almost sufficient with horses that have a thin skin, and that have not been neglected. After all, it is no slight task to dress a horse as it ought to be done. It occupies no little time and demands considerable patience, as well as dexterity. It will be readily ascertained whether a horse has been well dressed by rubbing him with one of the fingers. A greasy stain will detect the idleness of the groom. Where, however, the horse is changing his coat, both the curry-comb and brush should be used as lightly as possible. Whoever would be convinced of the benefit of friction to the horse's skin and to the horse generally, needs only to observe the effects produced by well rubbing the legs of a tired horse. While every enlargement subsides, and the painful stiffness disappears, and the legs attain their nat-

ural warmth, and become fine, the animal is evidently and rapidly reviving; he attacks his food with appetite, and then quietly lies down to rest.

EXERCISE.

Our observations on this important branch of stable management must have only a slight reference to the agricultural horse. His work is usually regular and not exhausting. He is neither predisposed to disease by idleness, nor worn out by excessive exertion. He, like his master, has enough to do to keep him in health and not enough to distress nor injure him; on the contrary, the regularity of his work prolongs life to an extent rarely witnessed in the stable of the gentleman. Our remarks on exercise, then, must have a general bearing or have principal reference to those persons who are in middle stations of life, and who contrive to keep a horse for business or pleasure, but cannot afford to maintain a servant far the express purpose of looking after it. The first rule that I would lay down is that every horse should have daily exercise. The animal that, with the usual stable feeding, stands idle for three or four days, as is the case in many establishments, must suffer. He is predisposed to fever, or to grease, or, worst of all, diseases of the feet; and if, after three or four days of inactivity, he is ridden far and fast, he is almost sure to have inflammation of the lungs, or of the feet. A gentleman's or tradesman's horse suffers a great deal more from idleness than he does from work. A stable-fed horse should have two hours exercise every day, if he is to be kept free from disease. Nothing of extraordinary, or even of ordinary labor, can be effected on the road or in the field without sufficient and regular exercise. It is this alone which

can give energy to the system, or develop the power of any animal. In training the trotter and the running horse, regular exercise is the most important of all considerations, however it may be forgotten in the usual management of the stable. The exercised horse will discharge his task (and sometimes a severe one) with ease and pleasure, while the idle and neglected one will be fatigued ere half his labor is accomplished, and if he is pushed a little too far, dangerous inflammation will ensue. How often, nevertheless, does it happen, that the horse which has stood inactive, in the stable three or four days, is ridden or driven thirty or forty miles in the course of a single day! This rest is often purposely given to prepare for extra exertion; to lay in a stock of strength for the performance of the task required of him, and then the owner is surprised and dissatisfied if the animal becomes stiffened or seriously ill. Nothing is so common and so preposterous, as for a person to buy a horse from a dealer's stable, where he has been idly fattened for sale for many a day, and immediately to give him a long drive, and then to complain bitterly and think he has been imposed upon if the animal is exhausted before he arrives at his destination, and is compelled to be led home, suffering from violent inflammation. Regular and gradually increasing exercise would have made the same horse appear a treasure to his owner. Exercise should be somewhat proportioned to the age of the horse. A young horse requires more than an old one. Nature has given to young animals of every kind a disposition to activity, but the exercise must not be violent. A great deal depends upon the manner in which it is given. To preserve the temper and promote health, it should be moderate, at least at the begin-

ning and the termination. The rapid trot or even the gallop may be resorted to in the middle of the exercise, but the horse should be brought in cool. There are many other points in stable management we would like to mention, but the size of our little volume will not admit of it.

CLOSING REMARKS.

Now dear reader, a word with you, and we are done. We have endeavored, in writing the system, to fully explain it, so that none need go astray; but it must be remembered, in handling wild and vicious horses, you have different dispositions to contend with. Every one who understands the true philosophy of horsemanship, knows that when we have a horse that is high mettled, wild, and lively, we can train him to our will in a very short time, for such are generally quick to learn, and always ready to obey. But there is another kind which are of a stubborn or vicious disposition, and although they are not wild, requiring no taming in the sense that is generally understood, they are just as ignorant as a wild horse, if not more so, and need to be educated just as much. And in order to have them obey quickly, it is necessary that they should be made to fear their masters; for in order to obtain perfect obedience from any horse we must first have him fear us; for our motto is, "Fear, love, and obey," and we must have the fulfillment of the first two, before we can expect the letter: and it is by our philosophy of creating fear, love, and confidence, that we govern to our will any kind of a horse whatever. Then in order to take horses as we find them, or more particularly if they are of a stubborn or *mulish* disposition—if he lays back his ears as you approach him, or turns his heels to kick you—he has not the regard or fear

of man that he should have to enable you to handle him quickly and easily. In such cases give him a few sharp cuts with the whip about the legs, pretty close to the body. It will crack keen as it plies around his legs, and the crack of the whip will affect him as much as the stroke. Beside, one sharp cut about the legs will affect him more than two or three over the back, the skin on the inner part of the legs, or about the flank, being thinner and more tender than on his back. But we do not whip him much—just enough to scare him. It is not because we wish to hurt the horse that we whip him, we only do it to scare the bad disposition out of him. But whatever you do do quickly, sharply and with a good deal of force, but always without anger. If you are going to scare him at all, you must do it at once; never go into a pitched battle with your horse, and whip him until he is mad, and will fight you. You had better not touch him at all; for you will establish, instead of fear and regard, a feeling of resentment, hatred and ill-will. It will do him no good, but an injury, to strike a blow, unless you can scare him; but if you succeed in scaring him you can whip him without making him mad, for fear and anger never exist together in the horse; and as soon as one is visible you will find that the other has disappeared. As soon as you have frightened him so that he will stand up straight, and pay some attention to you, approach him again and caress him a good deal more than you have whipped him; then you will excite two controlling passions of his nature—love and fear—and then he will fear and love you too; and so soon as he learns what to do, he will quickly obey. With these remarks upon the principles of my theory, I have endeavored to teach you how to put them in practice, and

all the instructions written you may rely on as having been proven practically by my own experiments; and knowing from experience just what obstacles I have met with in handling bad horses, I have tried to anticipate them for your good, and assist you in surmounting them by commencing with the first steps taken with the colt, and accompanying you through the whole task of breaking.

TRAINING STEERS.

AS TAUGHT BY A. H. ROCKWELL.

HOW TO TEACH STEERS TO OBEY THE WHIP.

First get your steer into a room, or small yard, so that he cannot run from you, then approach him gently and slowly, and if he runs do not be in a hurry; wait till he gets to the end of the enclosure, then approach him slowly, as before. A steer will often run from you in this way six or eight times. Do not try to stop him with your whip, or force him to think he will be at all injured, until he will stand and suffer you to approach him, As soon as this is accomplished, gently tie a rope around his body, near the shoulders, rather loosely. Then take another rope, or strap, and gently fasten one end to the near forward foot, then pass the other end over the rope, or surcingle beneath the body. This rope should be sufficiently long to allow him to run to the end of the enclosure without your moving, at the same time you holding the rope firm to compel him to move on three legs. Then approach him again, quietly; he will not run off in this way but a few times before he fully comprehends that he will not be injured. when he will suffer you to approach and handle him just as you please. Now take a short hold of the strap with your left hand, your whip in your right, which pass over his shoulders, and quietly touch him upon the off side of his head, at the same time saying "haw," and continue this until he moves his head a little towards you. Then stop and caress him upon

and about his neck and head. Repeat this until he haws around towards you. If he attempts to run from you, pull upon the strap, saying "whoa" and at the same time hitting him lightly upon the head with the whip. As soon as he learns in this way to stop at the word of command, and comes toward you readily, take off the strap and surcingle, and turn him out. Then take the mate, and give him the same course of training until you can accomplish with him a like result. Then turn *him* out. By this time the first steer is cool, and rested, ready to receive another lesson. Now drive him into the inclosure, and repeat his lessons with the whip. Then quietly touch him gently upon the near side of the head, at the same time saying "gee," until he will step around from you, then caress and repeat until he will gee or haw readily. Then repeat the same lesson with his mate, which is all that is necessary to be done the first half day. Then take both together in the same room, or yard, and repeat these lessons until they have a thorough understanding of what you have done. Then take one of them near the wall, standing by his side hitting with your whip gently over the head, at the same time saying "back," until he will step back, for which caress. Repeat this until he will go back at the word readily. Then give the other steer the same lesson. You will find this course of training will make your steers quite obedient, and willing to haw, gee, or back, which will be all that you should require in one day's time. The next morning, or when you have time, repeat this lesson with both together. Then place the yoke upon them, and let them go for an hour or two, or sufficiently long to become fully reconciled to the restraint of the yoke. Then repeat your lessons in

open yard, until they fully understand what you require of them yoked together.

This course of training does not excite, while it conveys the idea most clearly of what is required, and will enable the trainer to accomplish more in a given time than has yet been done by any other system of managing steers. If your steers have learned to run away from you, which is a common result of the ordinary method of training, put on the rope and strap, to the foot. If hitched to a wagon, or stone load, let your man hold the foot strap, which runs back between the steers, and the moment they attempt to run, let him pull up the feet, while you whip over the head, which will stop them immediately, and will very soon break up the habit.

KICKING COWS.

It is natural for the cow to stand while being milked. Consequently, the heifer knows nothing about kicking until hurt, or frightened into it. The lesson in regard to heifers is therefore perfectly plain. Be careful and not hurt nor frighten them. If, by accident, you should, and they kick, do not punish them for it. Kindness and gentle handling is the only remedy. If your cow kicks, let your reasoning for the cause be based upon the principle that she never kicked until she was injured, and the remedy will at once suggest itself. No cow was ever broken of kicking by striking with the stool or other weapon. This practice only puts the cow on her guard, and, as you come near her with the stool, she uses nature's defence and kicks. Handle her gently. If she walks off or kicks, pay no attention to it, using no loud words nor blows. If her teats are sore, she is quite liable to do

either; and you must have patience until they are healed. In our experience, we have never found a confirmed kicker in a yard where kindness was a characteristic of the family who handled the dairy; on the contrary, we have found plenty of them, where quarreling, loud words and general bad temper prevailed. Now, if you have a bad, kicking cow, you must have a plan by which you can control and break her of the vice. Take your surcingle and buckle it around her waist, just back of the fore legs; then attach your pole-strap to the ten-inch strap, and buckle around the nigh hind foot; then carry the pole-strap through the fourth ring of the surcingle, and draw the foot from the floor; let her remain in that position for a few moments; then gradually lower the foot until she can partially rest it on the floor; while in that position, it will be impossible for her to kick, and, in a short time, she will be effectually broken of the vice.

TRAINING DOGS.

The dog is the most domesticated, and (next to the horse) the most intelligent of all animals. He is easily taught, and, if properly treated, is a faithful and willing servant of man; if misused and ill treated, he is very apt to become disagreeable, and a nuisance. The dog being a favorite of mankind, it becomes a duty to educate him in such a manner that he will not only reflect credit, but become useful to his master, besides being an agreeable inmate to all members of the household. We have given particular attention to the subject, it being one which cannot fail to interest all readers. We have at present two of the best trained dogs in the country—Minnie, an Italian greyhound, and Tasso, a black and tan. They

are made to understand any words of the English language, simply by teaching them the act, and then the word from the act. The rules whereby any persons can educate a dog are simple, and easily understood, but it is necessary to be patient, kind and persevering—(the same as in all things). We give a few rules—sufficient to enable the operator to practice many more. Their are different breeds of dogs, and, of course, as many different habits and dispositions as breed; consequently it will require judgment to train them to that to which they are best adapted by nature. For instance, the St. Bernard is a faithful watch dog, while the setter will scent game without training; a terrier will catch rats, and the grey-hound takes to running from his birth. It is necessary therefore, in attempting to teach the dog, to bear in mind these natural habits, being careful not to urge upon him the performance of any duties, or tricks, which are manifestly not in his nature to do. When selecting dogs for any particular lesson, study this subject closely, as undoubtedly it is the most useful lesson to be taught. We have not given so much attention to educating the shepherd or the watch dog to drive; not being so fond of this kind as of teaching the more intelligent class of dogs certain tricks, &c., but we will give you the knowledge of the above as we obtained it from a celebrated dog trainer.

TRAINING THE SHEPHERD TO DRIVE.

Take a well-bred shepherd dog, about six months old, reared in some secluded place hearing no words with a meaning intended to be attached except his name. He should know nothing of the ordinary words in use towards dogs, and not have been handled by boys or careless per-

sons. Take him alone with you into a large room. The first thing to be done is to teach him to lead; to do this, place a strap around his neck, that cannot hurt him, to which attach a cord six or eight feet in length; stand still, and hold upon the cord for a few minutes, until he ceases struggling to get away. It is best to give one lesson each day during the whole training. The first two lessons should be devoted to teaching him that he cannot get away. Now, commence teaching him to come to you, by pulling upon the rope, and saying, "Here," using only the one word. In the use of this as well as all other words used in training the dog, one word is all it is best to try and teach him for any one act, it being so difficult to make him understand, if you attempt to teach him more. When he is once fixed in the habit of minding the word, you may then use such other words in connection therewith, as are pleasant to the ear, as, for instance, "come here, sir." Without the word *here* he will not know what you mean, and the others being meaningless to him, do not puzzle him. He will also be less liable to have too many masters, as the *one* word will not be likely to be used every time by a person unacquainted with your mode of training. Of course, if you prefer it, you may, in giving the lesson, substitute other words for those laid down; but we give those which are readiest to the tongue. As the dog comes up, whether voluntarily or not, say, "Do" and caress him. A lesson of an hour or two, each time working slowly and patiently, will be about right. Proceed with it until he will come to you from any portion of the room, at the word "Here." He will have learned by this time, probably, that the word "Do" is for him to understand that you are through with him. When he perfectly realizes

this you may then prefix words, and say "that will do," emphasizing the word *do* each time. You may also now say, "Come here," remembering that the words *here* and *do* are the only ones he obeys. He cannot connect sentences, nor be made to understand them when once connected. You now wish him to learn the words "Go" and "Halt." To do this you will place yourself in a portion of the room opposite to where the dog would naturally desire to go (the door, for instance, or something that would attract, him such as food,) say "Go" and by coaxing and urging him, start him along, as he gets part of the way, say "Halt," pulling upon the string, stopping him and saying "Halt" again. Proceed with this until he has, learned to obey both the words, "Go" and "Halt." To teach these four words named, will generally take three or four weeks. Now let him learn to bark at the word "Speak," by holding up something which he wants very much, for instance, food, when he is very hungry. You may then let him loose, and let him run about with you (previously keeping him confined, but not in a narrow place), being watchful that he does not stray off, nor be hurt, nor handled by others. He will soon become handy about the house, you having control of him through the words you have taught him and you can keep him in his place by the word of command. For instance, if you wish him to go out of doors, show him the door, and say, "Go out." The word "go" will start him, and in a little while he will become familiar with the word "out." Give him a fixed place to sleep, and teach him its name. If you have a dog already trained to drive and go behind, take him out with him to drive in the cattle. He will learn that they will run from him. Say nothing to him while he is

with the other dog, unless he attempts to go to the head of any of the cattle. This you must not allow. After two or three times, take him out without the other dog, and allow him to run after the cattle, provided the cattle are used to being driven by dogs. It will not do to let him run where there is a chance of being turned upon. If he drives them too fast, say "Steady. "He will not know what you mean, but, as you use words with him only when they mean something, he will be apt to pay attention and go slower. If he does not, say "Halt," then "Go," steadying him by the word "Steady," if possible. He will gradually learn its meaning by its repetition. If you have no other dog you will let him go without, being more watchful of him, that he does not go to the head of the cattle, otherwise say nothing to him, except "Go," not letting him start until he gets the word. After a while you may proceed to practice upon the other words he knows. If he shows no disposition to bite at the heels, or pull at the tail, take a rope, and tie a knot a short distance up, fringe out the end, and play with him with the rope, letting him catch hold of it, and causing him to bark at it by using the word "Speak." When he takes hold of the rope say "Up," and when you wish him to let go "Do." You may then with a slow cow, call him up, and taking hold of the tail, say "Up," and "Speak," to teach him to take hold of the tail and bark, when you say, "Start em up," and "Speak to them," and to let go when you say "That will do." Now accustom him to the word "Fetch," for sheep, and "Get," for cattle, etc., so that when you say "Go and get the cattle," he knows that you mean cattle instead of sheep or horses. You may now teach him to know the right from the left, and to obey

your orders in that respect, by taking him into a large room, and, by the motion of your right hand, try to have him go to the right from you, saying "Go—right." If he does not do it, say "Halt," and repeat. When he does do it, say "That will do." Continue this until he will go to the right at the motion of your hand and the word "Right"; then making motions with your left hand, and using the word "Left," you teach him the opposite .By these motions, and an appeal to the intelligence of the dog, by your countenance and eyes, you can start him for the fields in any direction you choose, and he soon learns to do what you want with very little telling. Following these rules will satisfy you that the dog can be taught indefinitely respecting all things which pertain to his peculiar nature.

THE WATCH DOG.

For a good watch dog, select one of a breed adapted to the business. There is but little that you can teach such an one, as it is somewhat of a natural trait, and any other than a natural watch dog, however much you may labor with him, will never be reliable. A barking dog, one that will be noisy on the approach of intruders, is the best. A dog that bites, but does not bark, is only fit to put in barns or other out-buildings, nights, chaining him up day times; and then he is dangerous even to his keeper, as a sudden start will cause him to bite any one. To teach your dog, give him something to watch, saying, "Take care of it," as you place him near the object. He will soon learn the word, and upon being directed to any particular thing will faithfully guard it. While teaching him, allow no one but yourself to approach him, without setting him on. You may have a stranger approach him

and tease him, you urging him to drive the stranger away, and as soon as he starts, let the person run, you calling the dog back. While young do not compel him to stay too long at one thing, and when you go up to him and say, "That will do," feed him something. After the manner spoken of in the previous illustration, whenever you wish the dog to bite, or go at any person or thing, you will teach him the words the reverse of what you mean, such as "Be still," "Get out," "Lie down." You will see that a person not understandiug the dog will not be very apt to get near him, as he would naturally make use of those words, and they would be setting him on instead of quieting him. To call him yourself, use such convenient word as you choose, but not one naturally used by others. As this ingenious use of words is about the only new idea we can suggest to teach watch dogs, the masters can use his own ingenuity to render it practical.

THE TRICK DOG.

Many amusing tricks may be taught which will exhibit in a wonderful degree the intelligence of the dog. As we have before said, much depends upon the breed. A dog of one peculiar breed may be taught a certain class of tricks, while that of another breed will be entirely different in his characteristics. A well-bred dog is hard to learn any tricks except those pertaining to his nature; while a mongrel cur is quite easy to learn any. Perhaps a Spaniel poodle dog is the most tractable of any; a black-and-tan is quite apt. We give a few examples, sufficient to form a groundwork for the intelligent operator to extend his list of tricks at his pleasure.

THE FIRST STEP TO BE TAKEN.

When you are preparing the dog to receive his first lesson, it is necessary to place him where you can control him. Procure a piece of cord ten feet long, and one-fourth of an inch in diameter, tie a knot at each end—one that will not slip. Take one end, place it around the dog's neck, to get the size, then tie another knot, and again place it around his neck, slipping the end with knot through, and make fast. The proper way of training him is with a whip, a small riding whip. In giving him his first lesson, should he attempt to run from you (as he undoubtedly will), give him a sudden jerk and say, "Come here;" as he comes back, talk gently, pat and caress him; that is to show him he has done right in coming back. A few pulls with the cord, and he will not attempt to leave you.

TO TEACH HIM TO SIT DOWN.

Press your hand upon his back toward the hind legs and say, "sit down," at the same time tapping with your foot upon the floor. If he attempts to lie down or draw his feet under him, coax him up, and teach him that "sit down" is what you are after, tapping him under the chin to keep his head well up. He will, after a few lessons, sit down at the word and a tapping of your foot on the floor, or with your whip, holding him by the cord; tap him lightly on the top of the quarters, saying "sit down," each time a little harder, until he sits down, then pat him to show he has done right.

TO MAKE A BOW.

When he gets handy, and will sit down at the word, then say to him, "make a bow." This trick he will learn in a very short time. As he sits down, place

your right hand on the top of his head, and with a quick move press down, saying, "make a bow." By accompanying the word with the act, quite often, each day, for a few days, he will understand the word without the act, and obey readily.

TO TEACH HIM TO SIT UP.

Set him up in the corner, and with a switch, hit him lightly under the mouth, snapping your finger and saying "sit up." As he comes down, put him back and repeat, until he remains, which he will do in a few minutes, then say "that will do," and coax him down, and caress him. When he has learned this sufficiently, set him up against a wall and try the same thing. This will require more patience, as he can so easily get over to either side. When, however, he will do it, then take him out in the centre of the floor; this will take still longer, but if followed up, kindly, and perseveringly, he will learn to perform the trick at the word and the snapping of the finger.

TO STAND UP.

Take some food in your hands, and offer it to him, holding it well up, and say "stand up." Repeat this until he will stand up quite readily, holding out your unoccupied hand for him to support his fore-feet on. Gradually take away your hand, each time that he comes up, saying "stand up." Then take him by the forward feet, and lift him up quite hard, and say, "stand up." You will soon get him so that when you lift him he will straighten up and show signs of standing; then make the effort to teach him to stand up at the word, and the holding out of your hand. You may now combine this with the last trick, saying, "sit up," "stand up," "that will do." These

are the first tricks he should be taught, as they are the foundation for others.

TO GET INTO A CHAIR.

This is easily done, taking your own way to coax him into the chair, using the word "chair" whenever you cause him to get into it. When he becomes familiar with the word, accompanied with a motion of the hand towards a chair, you may use other words in connection therewith, "Go and get into the chair." After he will do this handily, you may then teach him to put his paws upon the back of the chair, by asking him "to put them up," or saying "up," assisting him at first. When he will do it readily, you may teach him to put his head down upon his paws, by placing it there, and repeating the word "down," of course caressing him each time that he complies. To have him hold up his head, tap him under the mouth and say "up," remembering to say "that will do," when you are through the trick. You may teach him to jump over the chair by playfully coaxing him to do so, saying "jump."

TO MAKE HIM GO LAME.

Tap him with a little rod upon the hind foot, saying "lame," teaching him to stand and hold it up whenever you say "lame." Now coax him along, and if he puts it down, hit him quite smartly on the foot, making him keep it up until he will go lame at the word and a motion of the rod. Now whenever you send him to the chair, as before, as he goes to jump down, stop him, teaching him to wait for the word "do," as he comes down with his fore-feet on the floor, say "steady," and teach him to stop with his hind legs in the chair. He is now ready

TO RUN ON HIS FORWARD LEGS.

To teach him this, take hold of his hind legs, lift them up and walk him around in a circle, and place them in a chair, saying "round." Do this every time you perform the trick of having him get into a chair. After a while take him by the tail and lift him up, and, switching his hind legs lightly, walk him around in the same manner, saying "round," as before. With patience and perseverance he will learn to lift up his hind legs at the motion of the whip, and, on the words "go round," perform a circle, walking on his forward feet, and place his hind feet in the chair; of course the height of the chair must be adapted to the length of the dog's legs.

TO SIT ON A STOOL.

It is now very easy to teach him to "sit down" on a low stool. You may then teach him to "take a seat" on the stool by leading him around by his forward feet, and setting him on the stool with his forward feet held up, saying "seat;" you then have him learned to go on all fours, to sit down on the stool, and to go on his hind feet and take a seat with his forward feet up.

TO TEACH HIM TO FIND THINGS.

Take something with which he is accustomed to play, and, after getting him enlivened with play, call him up to you and blindfold him, and throw the article a short distance from you. If the dog has good scent, tell him you have "lost," then remove the blindfold and he will search and find it. Repeat this, throwing it farther each time, until you can throw your knife or anything which you have held in your hand, at a distance, you looking in the direction and saying, "I have lost my knife." He will search until he finds and brings it to you. If the dog

has not good scent, teach him to look down at the word "find," and up at the word "up," doing as before. We have now given a sufficient number of examples to set forth the important rules which govern the teaching of dogs. By an observance of these, you may teach your dog to climb ladders, fetch things to you, carry baskets, roll over, lie down, shut doors, and an almost innumerable number of tricks. To teach the dog, however, you must have perfect control over your temper, never whip severely, never get out of patience.

TO TEACH HIM TO CREEP.

First make him lie down on all fours; then get upon your knees, take your dog's fore paws in your hands, and rest the back of your hands on the floor; draw your hands, first one and then the other, toward you, saying "creep, creep, sir." If he attempts to get up, hold his fore legs fast to the floor, saying "careful, sir." As soon as he stops struggling, begin again. This is one of the easiest tricks for a dog to learn, and can be taught him in a very short time.

TO BE A DEAD DOG.

Take your dog by the fore shoulders; say to him "be dead;" at the same time lay him down on his side. He will at first struggle to get up, but hold him fast, and when he is quiet, take your hands from him. Work slowly and carefully. If he attempts to get up, hold his head to the floor again. In a short time he will lie down upon his side at the word "dead." When you wish him to get up, change your voice, and speak quickly but not harshly, "that will do, sir," or "dinner is ready," or "beefsteak," or any word you wish, and after he has thoroughly learned the word he will not get up until you speak it.

TO BALANCE ON THE BACK OF A CHAIR.

Take a common bar-room chair—one with wide arms is best; coax your dog up into it; take his fore paws and place them on the arm of the chair; pat and caress him as you proceed. Now get another chair, and place it about a foot from the first; stand on the outside of the chair, and coax him to come to you. They sometimes will jump over the arm; if they do, put them back again and speak out sharply, "careful." Try him again. He then will probably put all his feet on the arm of the chair. If he does, take the second chair away, and step in front of him as quickly as possible; put your hand under his chin and steady him; gradually take your hand away, and pat and caress him. If you have a small piece of meat to give him, so much the better; but never caress nor feed him unless he does right.

TO TEACH HIM TO WALTZ.

First teach him to stand up. Then take a piece of meat and hold it up above his head. If he jumps for it, take it out of his way, and give him a slight cuff on the ear. Now say to him "stand up." If he obeys you, give him a small piece. Then hold another piece near his nose, and carry it around over his head, saying, "waltz." If he turns after it give it to him. Try him so for several times; then make him turn two or three times before you reward him. Work this way for a short time, and he will waltz for you at the word, without any reward.

DISEASES OF THE DOG.

Administering Medicine. — We will commence this work by giving directions how to administer medi

cine. If your dog is not large, you can manage him by yourself. Invert a bucket and sit on it; set the dog down on his haunches, between your legs, holding him with your knees; tie a cloth around his neck; this, falling over his fore paws is pressed against his ribs by your knees; his fore legs, by this dodge, are "hors du combat." With the finger and thumb of one hand force open the jaws, elevating his head at the same time with the same hand. If a bolus, with the other hand pass it over the roots of his tongue, and give it a sharp poke downward; close the mouth, still holding up the head till you see it swallowed. If a draught, give a mouthful, close the mouth, hold up the head, and stop the nostrils. Repeat this if the draught is too large to be taken at once. If the dog is very large you must have an assistant, else in his struggles he will upset you and the medicine too.

Physic.—In giving a dog physic, be sure to keep him warm and dry, especially if you use calomel or mercurial preparations. Always remove him from the kennel and put him into a hospital apart from the rest, to prevent infection, as well as to insure the poor brute quietness. Study the appearance of the eyes, feet, nose, extremities, pulse, etc.

To Make a Bitch Inclined to Copulate.—Seven drops tincture of cantharides twice a day till effect is produced; about six days probably.

Mange.—Caused by dirty kennels, neglect, want of nourishing, or improper food. Cure—1 oz. salts, if dog of moderate size; rub every third day, well into the skin, of the following mixture: train oil (tanner's will do), 1 quart; spirits turpentine, 1 large wine glass full; sulphur, sufficient to make a thin paste; mix well; let it stay on the an

imal two weeks, then wash well with castile soap and warm water.

Worms.—Cowhage, ½ drachm; tin fillings (very fine), 4 drachms; make into four or six balls, according to size of dog; one daily, and a few hours afterwards, a purge of salts or aloes. Another remedy—powdered glass, as much as will lie on a quarter of a dollar, mixed with lard. Repeat once or twice alternate days; finish off with one or two drachms of soctrine aloes rolled up in tissue paper.

To Make a Dog Fine in his Coat.—A table-spoonful of tar and oatmeal; make bolus.

To Destroy Lice.—Sometimes the recipe for fleas will prove efficacious, but not always; put a small quantity of mercurial ointment, reduced by adding hog's lard to it, say an equal quantity, rubbed along the back never fails; but the greatest care must be taken to keep the animal warm and dry.

Distemper.—Distemper is caused by low keep, neglect and change of atmosphere. Symptoms of the disease are as follows: Loss of spirit, activity and appetite, drowsiness, dulness of the eyes, lying at length with nose to the ground coldness of extremities, legs, ears and lips, heat in head and body, running at the nose and eyes, accompanied by sneezing, emaciation and weakness, dragging of hind quarters, flanks drawn in, diarrhœa, and sometimes vomiting. There are several receipts for this, the worst of all diseases. One is better than another, according to the various stages. The first, if taken at an early stage, seldom fails; half an ounce of salts in warm water, when first taken ill; thirty-six hours afterwards, ten grains compound powder of ipecacuanha in warm water. If in two days he is not better, take sixteen grains antimonial powder, made into four

boluses, one night and morning for two days. If no improvement is visible, continue these pills, unless diarrhœa comes on, in which case you must use the ipecacuanha day, about with the pills. If the animal is much weakened by this, give him one teaspoonful Huxam's tinctura of bark three times a day. James' powder is almost a certain remedy—dose, four grains. In case of fits coming on destroy the animal. The same may be said of paralysis. If this disease is taken in its early stages and attended to, and the dog kept warm, there is not much danger, otherwise it is very fatal.

Bilious Fever is caused by want of exercise and too high feeding. Calomel, six or eight grains, or in an obstinate case, turpeth mineral or yellow mercury, six to twelve grains in a bolus.

Inflammation of the Bowels.—Symptoms: dulness of appearance and eyes; loss of appetite; lying on the belly with outstretched legs; pulse much quickened; scratching up the bed into a heap, and pressing the belly on it, desire to swallow stones, coal or any cold substance not voidable; inclination to hide away. It is very dangerous, and requires active treatment. Bleed most freely until the dog faints away: clap a blister on the pit of the stomach. Give aloes fifteen grains, opium half a grain; repeat dose three times a day. Bleed after twelve hours if the pulse rises again, and continue dosing and bleeding till either the dog or inflammation gives in. No half measures do in this case. If you get the upper hand there is no trouble; if not it is fatal. Feed low, and attend carefully to prevent relapse.

Staggers and Fits.—This generally happens in warm weather. Throw water on them if convenient; if not

bleed in the neck, if you have lancets; if not, slit the ears with your knife (you can cause them to adhere together again), or run your knife across two or three bars next the teeth. Bitches coming off heat are more subject to this than dogs in good health.

Bleeding—You may readily bleed a dog in the jugular vein, by holding up his head, stopping the circulation at the base of the neck. Part the hair, and with the lancet make an incision, taking care not to stick him too deeply. If the animal rejoices in a heavy coat, it may be necessary to shave away the hair. From one to eight ounces are the quantities; use your own judgment.

Canker in the Ear.—Wash well with soap and warm water; fill the ear with finely powdered charcoal or powdered borax. Clean out daily with sponge on stick and warm water, and repeat the dusting till it heals. Another remedy. Oak bark, one pound, chopped fine and well boiled in soft water. When cold take of the decoction of bark four ounces; sugar of lead, half a drachm, put a teaspoonful into the ear night and morning, rubbing the root of the ear well to cause it to get well into the cavities. This is one of the best receipts in this book.

External Canker of the Ear.—Butter of antimony diluted in milk to the thickness of cream, will cure it; or red precipitate, half an ounce with two ounces of hog's lard, mixed well.

For a Strain.—Use Bertine's liniment, or one ounce of turpentine, half pint old beer, half pint brine, bathe the part and repeat, or sal ammonia, one ounce, vinegar, one pint.

Bruises or Strains of Long Standing.—Gall and opodeldoc are excellent; shaved camphor, two ounces;

spirits of wine, three quarters of a pint; shake well, and cork close, placing it near the fire until the camphor dissolves; then add a bullock's gall, shake well together; apply, rubbing it well into the part affected until it lathers.

Dog Poisoned.—Give a teacup full of castor oil, after he has vomited well, continue to pour olive oil down his throat and rub his belly.

Fleas.—Scotch snuff steeped in gin is infallible; but must be used with great care, and not above a teaspoonful of snuff to a pint of gin—as the cure, if overdone, is a deadly poison.

Torn Ears.—Laudanum and brandy, equal parts, mix well; apply alternately with sweet oil.

Swelled Teats.—Make pomade of camphorated spirit of brandy, and goose grease; apply two to three times daily.

To Extract Thorns.—Cobbler's wax bound on to the place, or black pitch plaster or a poultice are equally good.

Films over the Eyes.—Blue-stone or lunar caustic, eight grains: spring water, one ounce. Wash the eyes with it, letting a little pass in. Repeat this daily, and you will soon cure it.

Films caused by Thorn Wounds.—Rest the dog till perfectly headed over, washing with rose water. If much inflammation, bleed and foment with hot water, with a few drops of laudanum in it—about forty drops of laudanum to one ounce of water; or two grains of opium to one ounce of water—one as good as the other. Then apply four or five times a day the following wash. Super-acetate of lead half a drachm, rose water six ounces.

Stripping Feet.—Wash in bran and warm water with a little vinegar; after, apply tincture of myrrh. Apply sweet oil before he goes out. If his feet are sore, wash in buttermilk until better, then apply brine and vinegar equal parts.

Wounds.—Poultice for a day or two, then apply Friar's Balsam, covering up the place.

For a Green Wound.—Hog's lard, turpentine and beeswax equal parts; verdigris one-fourth part. Simmer over a slow fire till they are well mixed and apply.

Purgative Medicines.—Salts, one ounce, calomel, five grains; or socotrine aloes, two drachms for a moderate sized dog.

To reduce the time a bitch is in heat.—Give her a little nitre in water, and a dose of calomel four grains or thereabouts, followed by salts or aloes.

Feed for Greyhounds in training.—Wheat flour and oat meal, old, equal parts. Liquorice, anise-seed and white of eggs. Make into a paste; make loaves, bake them; break into a very rich broth.

Bite of Snake.—Olive oil well rubbed in before the fire, and a copious drench of it also.

DISEASES OF THE HORSE.

INFLAMMATION.

From *inflammo*, I burn, is one of the most common forms of disease presented to the veterinary surgeon, and regarding which many erroneous opinions have prevailed, in consequence of which much injuriy and often serious consequences have resulted. Sound medical practice

must be based upon sound medical principles. A correct understanding of the term inflammation will assist us very materially in understanding the pathology of diseases in their most complicated forms. A few years since, every form of disease occurring in our domestic animals was regarded and treated as some form of inflammation; purging and bleeding were the order of the day. How different the practice of the present time.

The manner in which inflammation has been written upon, has made it a subject perfectly bewildering to the general reader, and from its being associated with every thing in actual practice, no idea of a very definite kind with regard to it will for a long time occur to his mind. With a view to overcome this difficulty, we will give the most simple definition of the term inflammation. "It is an unnatural or perverted action of and in the capillary blood vessels of a part; attended with redness, throbbing, swelling, pain, heat and disorder of function, with change in both its fluid and solid constituents, as well as with more or less general disturbance of the system." The extent to which structures in a state of inflammation will swell, varies considerably, depending upon the vital and physical characters of the tissue involved. Muscular tissue becomes very much swollen, while, on the other hand, horny and cartilaginous tissues swell but little, in consequence of their low state of vitality. It must be remembered that it requires an assemblage of the above conditions to constitute inflammation. Swelling, pain, heat or redness alone do not constitute that condition, as either may occur from causes independent of any inflammatory action whatever.

We now feel prepared to proceed with our remarks

upon the various diseases with which the horse is afflicted, with a better understanding regarding the interest of our readers, than we would have done had we passed this subject by unnoticed.

Capillaries.—The blood is the pabulum from whence is elaborated the entire organism, as well as the source from whence are derived all the various secretions and excretions of the system; but, in order that these purposes may be accomplished, it is necessary for the fluid in question to be circulated through, or its materials brought in contact with every tissue requiring fresh nutrition, as well as through the various secretory and excretory organs. To effectually accomplish this, we find a class of structures set apart and admirably adapted in every way to fulfil the purposes required. The first of these is the heart itself; next comes the large blood conduits, the arteries, which spring from the former, as the tree springs from the earth; while the arteries again terminate in a series of vessels of wonderful minuteness, just as the boughs of a tree terminate in the twigs. These minute vessels are denominated capillaries. These capillaries ramify, and are placed in the most intimate relation with every tissue throughout the body within whose substance reproduction and decay are in perpetual operations, as well as with those organs whose duty it is to furnish or separate the secretions and excretions already referred to. Each tissue selects from the common pabulum—the blood—thus sent to it, the peculiar principle it requires to support its own life and integrity.

The usual terminations of inflammation are resolution, mortification, suppuration, ulceration, hemorrhage, effusion, hepatization, and ossification. By *resolution* is

meant the state of the tissues after their recovery from the effects of inflammation.

Mortification is loss of vitality or death of the tissues involved.

Suppuration.—A collection of purulent matter, which receives the name of abscess.

Ulceration.—A purulent solution of continuity of the soft parts arising from loss of substance.

Hemorrhage occurs as a direct or indirect consequence of inflammation, from ulceration penetrating through the coats of an artery.

Effusion.—An exudation of serum, watery accumulations, as in dropsy.

Hepatization.—Conversion of a texture into a substance like liver.

Ossification. — Formation of bone — change of soft structures into bony ones.

The account we give is necessarily brief; but we trust it is sufficient to furnish the reader with a clear conception of the matter in hand, and in turn enable him to clearly comprehend that which is to follow.

DISEASES OF THE MOUTH—LAMPASS.

All young animals, during the period of dentition, have a fulness or swelling of the gums and bars, or roof of the mouth. In many colts it occasions but little or no inconvenience, while in others the pain is so great as to interfere with their feeding. When this condition exists, do not resort to the barbarous practice of burning with a red hot iron, but act humanely. Lance the bars with your pocket knife, if you have nothing better, as your family physician would lance the gums of your child un-

der similar circumstances, and in a few days the animal will feed as usual.

BAGS, OR WASHERS.

These are soft, puffy swellings of the lining membrane of the mouth, caused by the bit bruising the parts in reining. If inconvenient to the animal, they may be removed by cutting off a portion of the swollen parts with a pair of scissors or a knife, after which apply a little alum-water, or equal parts of tincture of myrrh and water, to the wound, two or three times a day.

SORE MOUTH.

This occurs from the same causes, and is situated usually at the angles of the mouth. Equal parts of tincture of myrrh, tincture of aloes, and water, is the best application we can make.

UNEVEN TEETH.

The molar teeth of the horse very frequently become sharp and irregular, interfering with mastication to such an extent as to cause the digestive organs to become impaired, giving rise to an unhealthy condition of the system. At times the insides of the cheeks become lacerated by their sharp edges, causing them to become tumid and sore. These cases can only be remedied by the use of the horse-rasp, an instrument made for the purpose.

WOLF TEETH.

These are two small teeth which make their appearance immediately in front of the upper molar teeth, in all colts at some period from the first to the fifth year. It is supposed by very many horsemen that they exert an evil influence over the eyes of the horse. My experience does not prove the fact, and I cannot reconcile my mind to believe that they, natural teeth, should be placed in the

mouths of all colts, if they were injurious to the eyes or any other organs of the body. If you wish them removed, the best plan is to extract them with a pair of dentist's forceps. In knocking them out, the roots are frequently left behind, and of course your object is not accomplished.

CARIES OF THE TEETH.

Caries, or decay of the teeth of horses, is a disease of frequent occurrence. The silence of veterinary writers upon the subject has caused it to be overlooked by those having the care of that useful animal, and the symptoms in consequence, have been confounded with those of other diseases.

Symptoms.—Occasionally we have a fetid breath, fetid discharge from one nostril, a wheezing in the head, food improperly masticated, passing away undigested, quidding, drowsing, hide-bound, staring coat, tucked up belly, tossing the head, stopping short on the road, shaking his head and starting on again, and at times becoming almost unmanageable. These symptoms do not all occur in the same animal; one appearing drowsy, requiring the whip to urge him on, while another, at times, is wild and frantic with pain, taking the bit, and becoming troublesome to manage, occasionally running away. Some of those symptoms occur in other diseases; but we should not overlook the teeth in our examination when any of the above symptoms appear. The only remedy is the extraction of the diseased teeth.

DISTEMPER.

All catarrhal affections are classed under one general head, namely, distemper, by horse owners generally; a common cold, sore throat, influenza, bronchitis, and several others are regarded as distempers. We will endeav-

or to make the distinction in such a manner that each form of disease may be readily discovered, and the proper remedies applied. Distemper, as we should understand it, is the mildest form of catarrhal affections. A common cold, for instance, is an inflammation of the lining membrane of the nose, causing a secretion of mucus, which is more or less abundently discharged from the nostrils, in severe cases the inflammation extending down the *trachea*, or windpipe, to the bronchial tubes, and sometimes to the lungs, producing diseases, which are classed under different heads, and often requiring different treatment.

TREATMENT.— Oil of origanum, 1 ounce; oil cedar, 1 ounce; tincture cantharides, 1 ounce; olive oil, 4 ounces; shake well and bathe the throat and glands morning and evening for six days; rub in well with the hand; he will throw out freely, and the cure is performed.

SORE THROAT.

This is usually one of the first indications of catarrh, and when confined to that portion of the throat at the angle of the jaws, it is termed laryngitis. The symptoms of this disease are well marked: the head is stiff and if the throat is rubbed or pressed upon, coughing is excited; the animal manifests difficulty in swallowing, and frequently considerable salvia collects in the mouth.

TREATMENT. — Apply strong mustard made into a paste with vinegar, to the throat, aud rub it well in; or linseed oil, two parts, with spirits of hartshorn, one part will answer a good purpose. Give upon the tongue half a teaspoonful of powdered saltpetre twice a day.

STRANGLES.

This is a more severe form of laryngitis, involving the glands of the throat, causing a very great swelling,

which often threatens suffocation; the respiration becomes disturbed, the breathing laborious, and can be heard at a considerable distance; the animal sweats from his convulsive efforts to breathe, and if not relieved, dies a violent death. Here the aid of the qualified veterinary surgeon is absolutely required, as there are few persons competent to perform the operation of tracheotomy, that is opening the windpipe to admit air into the lungs. This, early performed, frequently saves the animal's life.

Treatment. — Poultice the throat well with flaxseed meal, steam the nostrils two or three times a day, and as soon as the swelling under the jaws becomes soft, it should be lanced. When relief is once obtained, the further treatment of these cases is the same as for ordinary sore throat.

INFLUENZA.

Spring and fall are the seasons most productive of epidemic catarrh. One year it assumes a mild form, the next, perhaps a most malignant one. Influenza is known to horsemen under the common name of "pink-eye distemper."

Symptoms.—These vary very considerably in different animals. The usual or leading symptoms are; Slight watery or thin mucus discharges from the nose, eyelids presenting a reddish or orange-red appearance, matter collects in the corners of the eyes, pulse feeble, great debility, as shown by the quick, feeble action of the heart—a symptom rarely absent—membrane of nose much reddened, sore throat and cough; occasionally the feet become fevered, as in founder, causing much stiffness, which may be easily mistaken for that disease.

Treatment.—This being a typhoid disease; requires a

sustaining treatment, or our success will be very doubtful. In the early stage of the disease give the first two days, ten drops of tincture of aconite, or bryonia, in a little water, every six hours; after which give in a pail of water, to drink once a day, one ounce of spirits of nitre, or two drachms of extract of belladonna; and give in the feed, three times a day, one of the following powders: Gentian root, saltpetre and anise seed, of each one ounce—sulphate of quinine, one drachm; mix and divide into eight powders; or, powdered cinchonia and powdered quassia, of each, two ounces, powdered anise seed, one ounce; mix and divide into four powders. The throat should be bathed in mustard and vinegar, or with linseed oil three ounces, spirits of hartshorn one ounce, mixed together. No hay or corn should be given but scalded oats and wheat bran, with linseed tea or oatmeal gruel, should constitute the diet; a few carrots would be very good, and above all, good nursing is very desirable.

BRONCHITIS.

This is an inflammation of the bronchial tubes, as its name implies, the air tubes of the lungs. It is usually preceded by a shivering fit, the mouth is hot and full of saliva, the throat is sore, and if pressed upon excites a painful cough, discharge from the nose, appetite lost, pulse quick, and respiration labored, eyelids and nostrils reddened; on applying the ear to the side, a gurgling sound is heard.

Treatment. Give the following ball in the early stage of the disease: Nitrate of potassa, pulverized digitalis and tartrate of antimony, of each half a drachm, molasses sufficient to make the ball. If the fever is not broken in

twelve hours, repeat the ball. As soon as the desired object is obtained, give one of the following powders twice a day, in a sloppy mass; Nitrate of potassa one and a half ounces, nitrate of soda, six ounces, divide into six powders; or give the following: Extract of belladonna one drachm, spirit, of nitre, one ounce, solution of acetate of ammonia, four ounces, in half a pint of water, as a drench. The throat and sides should be blistered; the ordinary fly blister, made thin with turpentine, is very good, or mustard mixed with equal parts of water and spirits of hartshorn. Either of the above, when used, should be well rubbed in with the hand.

NASAL GLEET.

This is a chronic discharge, from one or both nostrils, of a whitish muco-purulent matter, the result usually of neglected catarrh. The general health of the animal does not seem to suffer; he looks well, feeds well, and works well; yet we have this discharge, which is caused by weakness in the secretory vessels of the lining membrane of the nose. The successful treatment in all cases where this disorder has existed, has been on the tonic principle; bleeding and purging are positively injurious. Give one of the following powders night and morning; Sesquichloride of iron, two ounces, powdered cinnamon one ounce, mix and divide into four powders; or carbonate of iron pulverized gentian and pulverized quassia, of each one ounce, divide into four powders; or nux vomica pulverized, one-half ounce, linseed meal two ounces, divide into eight powders. Another good preparation is muriate of barytes one-half ounce, linseed meal one ounce, divide into eight powders.

PNEUMONIA.

This disease is known to horsemen as lung fever. It is either inflammatory or congestive, arising from various causes—as high feeding, badly ventilated stables, violent exercise, or sudden changes from heat to cold. In the congestive stage there is no pulse to be found, and on applying the ear to the side, no sound is heard; cold sweats bedew the body, the respiration is labored, eyes wild in their expression, legs cold, the animal appears dull and stupid, and is with difficulty made to move; he does not lie down. In these cases medicines are not required; in fact, they often do more injury than good; the free and speedy use of the lancet is our only hope, and a pure air is of the greatest importance; a pail of cold water should be placed before the animal, but no food should be given until the animal is relieved; and then only mashes of wheat bran. Under this treatment he will speedily recover, or inflammation of the lungs will be established. The pulse now becomes quick, the mouth hot, legs cold, head hanging in or under the manger, appetite lost; on applying the ear to the side, a crepitating or crackling sound is heard; respiration quick; the treatment here must be prompt and energetic; blisters to the sides, such as previously spoken of, must be used, and give internally two ounces of spirits of nitre in half a pint of water; follow this in two hours with ten drops of tincture of aconite in water, to be given every six hours until relief is obtained; or give instead one of the following powders; Tartrate of antimony, pulverized digitalis, of each one drachm; nitrate of potassa, one ounce; mix and divide into eight powders; give one every four hours upon the tongue. Injections of soap and water are very useful in these cases. The legs should be hand-

rubbed, and stimulated with mustard or cayenne pepper, and then wrapped in woolen bandages; a pure atmosphere and good nursing are very necessary.

PLEURISY.

This is an inflammation of the lining membrane of the chest and covering of the lungs. The symptoms are: uneasiness, pawing, looking at the sides, pulse quick, pain or pressure over the ribs, body hot, lying down but rising quickly The same treatment as in inflammation of the lungs is called for; but under no circumstances should bleeding be resorted to. These cases are very apt to terminate in hydrothorax, or

DROPSY OF THE CHEST.

Symptoms—Breathing short and quick, legs straddling, pulse small and quick; breast, belly, and sheath swell, and leave the mark of the finger when pressed upon; the animal stands until he dies. The treatment of this disease, as a general thing, is not very satisfactory. The iodide of potassa, in half-drachm doses, three times a day, has proved the most useful medicine in such cases, in connection with setons in the breast and sides.

BROKEN WIND, OR HEAVES.

This disease is well known to horsemen; so we will content ourselves merely by giving the most successful remedies, which for the most part, are only palliative. Divide half an ounce of pulverized digitalis in twenty parts, and give one part night and morning in the feed, until gone; this will usually allay all signs of the disease in two weeks. Or, take assafœtida, two drachms; camphor, one drachm; mix and give it every other night for a week.

INFLAMMATION OF THE BOWELS.

This disease may appear suddenly or it may be slow in coming on. The symptoms resemble those of colic, with which disease it is often confounded. The pulse is our certain guide in determining the character of the disease; when that is full and natural, or nearly so there is no inflammation; if full, strong and quick, there is inflammation; other symptoms corresponding, there is no difficulty in determining the case. In colic, the symptoms of pain are intermittent; in inflammation of the bowels, there are no intermissions. Other symptoms which are present in both diseases are pawing, kicking the belly, rolling and tumbling about, sweating, haggard expression of countenance, looking at his sides, etc.; in colic, the legs usually are warm; in inflammation of bowels they are cold.

Treatment.—Bleed freely from the neck-vein, and give ten drops tincture of aconite every three hours; apply blankets saturated with hot water to the entire body, and keep it up for two hours; then remove the wet ones and replace them with dry ones, well-secured with a body girth. Injections of tobacco smoke are very useful in these cases, when not convenient, soap and water will answer the purpose. No food of any kind should be given for at least forty-eight hours.

DIARRHŒA.

The cause of this disease is exposure to cold, over exertion, change of water, over-doses of cathartic medicine, etc.

Treatment.—Give one of the following powders every six hours until the bowels are checked; powdered opium, one drachm; powdered catechu, two drachms; prepared chalk, one ounce; mix and divide into four powders.

COLIC.

This disease—known also as gripes, cramp and fret—is either spasmodic or flatulent. Spasmodic colic is a spasmodic contraction of the muscular coats of the intestines, causing griping pains, etc., (see inflammation of bowels.) Flatulent colic is an accumulation of gas in the stomach and intestines, generated by fermentation in the stomach, causing swelling of the abdomen, and sometimes rupture of the stomach.

TREATMENT.—For spasmodic colic, give one ounce tincture opium and one ounce of sulphuric ether in half a pint of water; this should be repeated in half an hour if relief is not obtained. Or, give the following: tincture of opium, one ounce; aromatic spirits of ammonia, half an ounce; extract of belladonna, one drachm; water, one pint; mix. In flatulent colic give chlorate of potash, one-half ounce; sulphuric ether, one-half ounce; tincture of aloes, three ounces; water one pint; mix and drench.

WORMS.

Thousands of animals die annually from the ravages of these pests, without the true cause being suspected; especially is this the case in the young of the mare, cow sheep and pig. Many varieties of these parasites belong to our domestic animals which have not been mentioned by veterinary writers; they are found in every tissue of the body, even in the blood. The symptoms of worms have been but very imperfectly described by writers upon the subject. In an experience of many years, I have observed the following symptoms, but not all in the same animal. Each variety of worm has its characteristic symptoms, namely: in bots, we rarely have loss of con-

dition, but when the bots become troublesome, colicky pains, gasping, quickened respiration, staring or haggard expression of the eye, with a strong tendency to inflammation of the bowels will be observed. Bots are rarely troublesome except when passing away in their regular manner, which occurs from May to August in each year. In most other varieties of worms the symptoms are debility, feebleness, sluggish movements, emaciation, staring coat, hide-bound, and skin covered with scurvy blotches, rigidity of loins, small and feeble but slightly accelerated pulse, respiration slow, tucked-up belly, a peculiar pallid appearance of the lining of the lips, (a certain indication), irregular, capricious, but persistent appetite, badly digested fæces, agitation of heart and tail; and where the fundament worms exist, a whitish or yellowish-white substance will be found about the fundament, indicated also by rubbing the tail.

The treatment for worms has been attended with much uncertainty heretofore, and is to the present day, with practitioners generally. Those on which most dependence has been placed are; calomel, one half drachm; tartrate of antimony, one half drachm; linseed meal, one half ounce; mix and give at night. Or, iron filings, two drachms; common salt, one-half ounce; powdered savin, one drachm; linseed meal one-half ounce; mix and give every night for a week. Or, assafœtida, two drachms; calomel, one and a half drachms; savin, one and a half drachms; oil male fern, thirty drops; linseed meal, two drachms; mix with molasses and give at night. Or, calomel, one drachm; powdered wormwood, one ounce; honey sufficient to make the ball; give at night. Follow either of the above with the following ball: barbadoes

aloes one ounce ; pulverized gentian, two drachms ; pulverized ginger, one drachm ; water sufficient to make the ball. Another remedy highly recommended is the following. Barbadoes aloes, six drachms; male fern, four ounces; spirits turpentine, two ounces; mix and divide into six balls ; give one three times a day.

RETENTION OF URINE.

This is known by frequent but unsuccessful efforts to stale. In some animals it arises from a dislike to spatter their legs in voiding the water ; hence a horse will frequently retain it in the bladder until the litter is shaken up under him, when he will at once relieve himself. When the result is spasm of the neck of the bladder, an instrument is used called a catheter, made expressly for the purpose ; this is passed up the urinary passage to the bladder, when the water will flow freely and give instant relief.

PROFUSE STALING.

The causes of this disease are, the improper use of diuretic medicines, as saltpetre,, rosin, etc. Unwholesome food will sometimes produce it. Treatment: Give one of the following balls every night—powdered opium, one-half ounce ; powdered kino, one ounce; prepared chalk, one ounce; mix with molasses and make six balls.

STONES IN THE BLADDER.

These may exist a long time in the bladder before any symptoms arise indicating their presence. The first symptoms of stone are, frequent efforts to urinate, voiding small quantities, usually of a thick whitish color; as the stones increase in size, the symptoms become more aggravated, colicky pains are indicated, rendering it difficult to distinguish the difference ; the animal paws, kicks at his belly, lies down, rolls, and gets up quickly. In

some cases, these obstructions are dissolved by the administration of muriatic acid, two drachms, in a pail of water once a day. When this fails, an operation for the removal of the stone is the only remedy. This is not, comparatively, a dangerous operation, in the hands of a skillful surgeon.

QUITTER.

This is a formation of pus between the hoof and the soft structures within; a sore at the coronet or upper part of the foot, which at first is a hard, smooth tumor, but soon becomes soft, and breaks, discharging quantities of pus. Treatment: poultice the foot for several days with flax-seed meal. As soon as the hoof becomes soft, cut away all loose portions, but no more, and inject with a syringe, either of the following, once a day: Chloride of zinc, 2 dr., dissolved in one pint of water; or sulphate of zinc, 1½ dr., dissolved in one pint of water; or nitrate of silver, 2 dr., in a pint of water; or glycerine may be used with advantage. Before using the wash have the foot well cleaned with castile soap and water.

THRUSH.

This is a disease of the frog, causing a discharge of matter from its cleft or division, occasionally causing lameness. The treatment is simple and effective: Wash the feet well with soap and water, and sprinkle a small quantity of pulverized sulphate of copper in the cleft, and secure it by pressing a little raw cotton down upon it in such a manner as to keep out the dirt. In two or three days repeat, if necessary. It rarely requires a second dressing.

CANKER.

This is a more aggravated form of thrush, often prov-

ing very troublesome to manage. It is a continuation of the thrush between the horny frog and the internal structures of the foot, causing separation between them. Treatment: cut away all the horn which has been separated from the soft structures of the foot, and apply the following ointment: Take equal parts of pine tar and lard, melt over a slow fire, and add suphuric acid very slowly until ebullition ceases; or use collodion, half an ounce; castor oil, one ounce; mix and apply to the parts. The foot must be protected from dirt by a bandage or a leathern boot.

SCRATCHES.

This disease is well known to all horsemen. Treatment: Wash the parts well with castile soap and water, and when dry apply once a day the collodion and castor oil recommended in canker; or use a saturated solution of the bichloride of mercury once a week, but not oftener, or mischief may arise in consequence of a too free use.

GREASE HEELS.

This is a white, offensive, greasy discharge from the heels of the horse. The skin becomes hot, tender and swollen; the acrid character of the discharge often causes large portions of the skin to slough away, leaving an ugly sore behind. Treatment: open the bowels with the following ball: Barbadoes aloes, 1 oz.; pulverized gentian root, 2 dr.; pulverized ginger, 1 dr.; water sufficient to make the ball. Wash the parts well, and poultice for two or three days with the following: Flax seed meal mixed with a solution of 2 dr. sulphate of zinc to a pint of water, after which keep clean and bathe frequently with glycerine, or the solution of zinc, or a solution of the chloride of lime may be used; or the bichloride of mercu-

ry may be used in inveterate cases with good results, provided it be not repeated oftener than once a week.

WATER FARCY.

Anasarca, as it is technically called, is of two kinds; one occurring in young animals, from inflammatory action, the other in old horses from general debility. It is known by swelling of the legs, belly, sheath, and other parts. In young animals there is heat, and pain on pressure on the swollen parts; in old horses there is no pain on pressure, but the marks of the finger are left behind.

Treatment.—Give one of the following powders night and morning in the feed: Sulphate of iron, 2 oz.; nitrate of potassa, 1 oz.; pulverized gentian, 1 oz.; pulverized ginger, 6 drs.; anise seed, ground, ½ oz.; mix and divide into eight powders; or sulphate of copper; nitrate of potassa, and pulverized gentian, of each one ounce; pulverized ginger, ½ oz.; anise seed, ground, 5 drs.; mix and divide into eight powders. Hand rubbing and moderate exercise every day are very important, with a pure atmosphere in your stable.

FOUNDER.

This disease occurs generally in the horse with hard brittle, or, contracted hoofs, in consequence of their inability to yield to the weight of the animal. In this condition they wait for the exciting or immediate cause to develop the disease. These causes are a hard drive upon a hard road, watering when warm, particularly when pump or spring water is used, standing in a draught of air, etc.

Symptoms.—Fore feet thrown forward, resting upon the heels; weight of the body thrown back upon the hind legs; front feet hot and tender, pulse full and quick;

respiration accelarated ; the animal in very severe cases seeks relief by lying down.

Treatment.—If the animal is in full condition, bleed freely from the feet, and give the following : Barbadoes aloes, 6 drs.; croton oil, 6 drops ; pulverized ginger, 1 dr.; pulverixed gentian, 2 drs.; mix with water in form of a ball ; foment the feet well with hot water, and then poultice with flaxseed meal for several days ; give in the water, every six hours, extract of belladonna, 1 dr. Under this treatment the worst cases usually recover in one week's time if taken in hand early.

POMICED FEET.

This disease is known to horsemen as falling of the sole, and is the result of neglected founder. Careful shoeing, so as to protect the sole, is all that can be done in these cases.

NAVICULAR-JOINT LAMNESS.

Coffin joint lameness, as it is commonly called, is one of very common occurrence, and the symptoms often so obscure as to mislead the ordinary observer. This disease generally is preceded for months before lameness is observed, by pointing; that is, by advancing one foot whenever the animal is at rest. The degrees of lameness varies considerably in different animals. In one case it is seen in the first half-mile's travel only ; in others it continues for a mile or two, and then disappears ; in some it continues during a journey, but as the animal gets warmed up, it is not so severe as on the start. In some cases it disappears for weeks together ; and then shows itself again, gradually increasing in intensity until it becomes a permanent lameness. In the early stages of the disease there is no heat to be discovered about the foot, no swelling, no

pain on pressing the heels; the animal picks up the foot nicely, but drops it tenderly, striking the toe first; the shoe, therefore, is worn considerably at the toe and very little at the heels. Should a horse be slightly lame in both feet, the symptoms are still more obscure and difficult to diagnose. The action of the horse now becomes changed; he no longer bends his knees with the same freedom as before; he steps short, the heels scarcely touching the ground, which is a good indication of the disease.

Treatment.—In recent cases, the application of a proper blister is usually successful; the common fly blister, thinned with spirits of turpentine, answers a very good purpose; or the following which must be used with great caution to prevent its leaving a blemish behind; powdered cantharides, two drachms, oil of turpentine two drachms, powdered euphorbium, one drachm, oil of origanum, one drachm, hog's lard, two ounces. Mix all together. This should not be repeated after the blister acts. In cases of long standing, a seton put through the frog will often be of great service in restoring the animal to usefulness.

OSSIFICATION OF THE LATERAL CARTILAGES.

These cartilages are two grizly projections or wings attached to the coffin bone at the heels, and may readily be felt above the hoof. From contraction, corns and other causes, these elastic bodies often become changed from gristle to bone in consequence of inflammation, leaving the horse with thick heels and a short, tender tread in traveling. The treatment in these cases is only palliative in its confirmed state; the same treatment as for navicular-joint lameness is proper.

SHOULDER STRAIN.

This arises from slipping, severe blows, falling in the shafts, etc. The symptoms are all well marked. The animal, instead of raising the foot, drags the toe on the ground in walking; on making a lever of the leg, by bringing it forward, the animal manifests much pain; these usually are positive symptoms.

TREATMENT.—Bleed freely from the Plantar vein, running down upon the inside of the front legs. Foment the shoulders well with hot water if the case is a recent one. If of long standing, a seton will be more effective. The following liniment will be a useful application; Sweet oil, one pint, spirits of hartshorn, three ounces, spirits of turpentine, two ounces, mix all together; shake well before using. Or, alcohol, one pint, spirits of camphor, tincture of myrrh, castile soap, of each one ounce; mix all together; or, oil of turpentine one ounce, tincture of opium one ounce, soap liniment one ounce, tincture of capsicum one drachm; mix all together.

CAPPED HOCK.

This is a bruise of the cap or point of the hock joint forming a serious abscess.

TREATMENT.—Apply the blister recommended in coffin joint lameness. Tincture of iodine or iodine ointment is sometimes useful.

BONE SPAVIN.

This is one of the most common causes of lameness in the hind legs. Spavin arises from strains, sprains or blows upon the hock joint, causing an inflammatory condition of the cartilaginous cushions which cover the uniting surfaces of each bone or of the ligaments that surround the joint and bind the bones together; sometimes

both are involved. This inflammatory condition of the joint may be considered the exciting cause of spavin, and, if not speedily removed, spavin soon follows; the synovial fluid, commonly called joint-oil, is soon absorbed, the cartilages of the joint are turned to bone, which unite one with the other, forming one solid mass, destroying the mobility of the parts involved, and constituting what is technically called anchylosis of the hock joint. This union of the bones is not always general, there being in many cases but two, three, or four of the bones involved. When these changes are confined to the cartilages, there is no external enlargement; on the contrary, when the ligaments surrounding the joint are involved, we have in all cases external enlargement. When the hock receives an injury, the course of treatment usually pursued by horsemen is very pernicious. The application of a blister to an inflamed surface must do injury by increasing the inflammation they wish to abate, and in many cases actually producing a spavin where it otherwise would not exist. I do nat deny that blisters are necessary and useful in such cases, if properly applied; but the idea of rubbing blisters on an inflamed surface, to reduce it, is like throwing shavings on burning coals to extinguish them. The educated physician, in applying a blister, does it so as to draw the inflammation from the part affected to a part where it will do no injury; otherwise, it had better not be applied at all. When the disease has advanced so far as to produce alteration of structure in the part, the application of blisters is proper, not for the purpose of curing the disease, but with a view of removing the lameness, by increasing the inflammation, thereby causing a more speedy union of the diseased bones, which

when perfect, causes the animal to travel sound. The seton I have found the most successful in long-standing cases. In the early stages, that is, before any alteration of structure takes place, the application of cold water to the parts will often abate the inflammation, or a blister applied above or below the hock will have the desired effect. Cooling embrocations, such as vinegar and water, are also good. When there is external enlargement, active blisters should be applied over the part. Liquid blister: powdered croton seed, ½ oz., powdered cantharides, 1 oz., oil of turpentine, 1 pt., olive oil, 1 pt.; mix all together and shake well before using.

RING-BONE.

This is a disease precisely like spavin, location only giving it a different name. The same alterations in structure take place, the same termintions follow, and the same treatment is called for. Ring-bone, unlike spavin, rarely occurs without enlargement. I have never known of but one case of the kind.

SPLINT.

This is a bony deposit situated between the cannon and splint bones, well known to all horsemen, rarely causing lameness, except when it is situated so as to interfere with the action of the knee-joint, or at the lower extremity of the splint bone. Few horses attain the age of eight years without having them; they disappear in time by spreading over a greater surface of bone, becoming flat upon the surface, giving rise to the opinion often indulged in by horsemen that old horses never have splint. Splint is a disease of the same character as spavin, and requires the same treatment.

CURB.

This is an enlargement at the back part of the hock about four inches below the cap, arising from strains, bruises, breaking down of the hock, etc.

Take benoidide of mercury three drachms, lard two ounces, mix it well; clip the hair close, just the size of the enlargement, rub the ointment on with the finger. In three or four days the matter which oozes from the enlargement will form a thick scab; soften with fresh lard and pick it off; rub dry with the hand, and apply as above. Five or six applications will remove any curb. For splints apply in the same manner.

BLOOD OR BOG-SPAVIN.

This is but one disease, a bursal enlargement or an increase in the secretion of the joint-oil causing distention of the capsular ligament which surrounds the joint, causing puffy swellings on the front and inside of the joint, rarely causing lameness. Thoroughpin is the same disease on a more extensive scale, causing the enlargement to extend through the joint from one side to the other. The only successful treatment which I have found, with a few exceptions, is cold water compresses, placed upon the joint in such a manner as to press upon the swollen parts, and retain them there for six or eight weeks. by means of a leathern socket made to fit the joint; the compresses to be changed every day; old muslin or woolen cloth is the best material to use.

PALPITATION OF THE HEART

This disease is known to the horsemen as the thumps, in consequence of the violent action of the heart, causing a jerking or shaking of the entire animal frame, observable at a distance of several yards. This disease is some-

times preceded by an obscure lameness, generally occurring in the off fore-leg, which, in medical language, is termed sympathetic.

Treatment.—The worst cases yield in two hours to the following simple treatment: Divide 1 dr. of digitalis into 5 powders, and give one every fifteen minutes, on the tongue.

INFLAMMATION OF THE BRAIN.

Mad staggers, as this disease is called, arises from various causes. Blows over the head will produce it, overfeeding, a tight collar, powerful stimulants, etc. Symptoms: the animal at first is dull, and moves with apparent reluctance; the membranes dividing the eye-lids and nose are much reddened, pulse full and quick, appetite lost, a vacant stare about the eyes, ending in delirium or madness. Every thing around the animal is destroyed or injured; he continues his ravings until exhausted.

Treatment.—Open the jugular vein as quickly as possible; this should be done before the mad stage comes on or it is too late to be of much service. Open the bowels freely; give the following: Barbadoes aloes 1 oz., croton oil, 10 drops, ginger, 1 dram., gentian, 1 dr., mix with molasses or honey. Give tobacco smoke injections if convenient, or soap and water will answer the purpose; give on the tongue, every two hours, 10 drops tincture of aconite, until 8 doses have been given, and then stop the aconite; give cold water to drink and apply cold-water bandages to the head, or bags of ice would be better; give no food for twelve hours after relief is obtained.

STOMACH STAGGERS.

This disease occurs in horses that are great feeders; in consequence the stomach becomes enormously distended,

causing pressure upon the lungs and heart, interfering with the action of both, and causing a determination of blood to the head, producing stupor, with a tendency to pitch forward, resting the head against a tree or any object which may be in his way; the head often becomes bruised and cut by coming in contact with hard and rough objects; the bowels are constipated, the pulse full and slow, respiration disturbed, etc.

TREATMENT.—Give the purging ball recommended in inflammation of the brain, and bleed freely from the jugular vein; give no food for forty-eight hours. This is all the treatment the animal requires. As soon as the bowels are opened the animal is relieved. Care should be used after recovery not to allow the animal too much provender, and keep the bowels in good order, as a preventive of subsequent attacks.

POLL-EVIL.

This disease is said to arise from blows upon the head behind the ears, in going in or out of stables with low doors, pulling upon the halter, etc. Such injuries in animals whose blood is in a bad condition will cause poll-evil; but it cannot live in a healthy system. The author's experience convinces him that the disease oftener arises from hereditary causes than from any other, having met with, on several occasions, two or three unbroken colts, from the same mare, affected with this disease, proving beyond a doubt the ready transmission of the disease from parent to offspring.

TREATMENT.—The blood must be thoroughly purified before a cure can be effected. Give the following powder; pulverized sulphur, one pound; black antimony in powder, one-half pound; mix together; dose, one table-spoon-

ful morning and night, in the feed. No corn nor corn-meal should be given. Open the bowels with aloes or linseed oil. Lay the tumor open with a knife, and inject into the opening a solution of sulphate of zinc, two drachms to a pint of water; or the tincture of iodine is very good; sulphuric acid is used in some cases, but it is a dangerous remedy.

FISTULA OF THE WITHERS.

This disease is situated on the withers, or the raised line of the back, over the shoulders, and is precisely the same disease as poll-evil, location only giving it a different name. It is more common than poll-evil, as ten to one, arising from the same causes, and requiring the same treatment; it yields, however, more readily than the former disease.

GLANDERS.

This loathsome disease has defied medical treatment in all ages of the world. It is one of the most treacherous diseases known to man, being highly contagious, and communicated readily from horse to horse and from horse to man by means of inoculation. Hence the best treatment is a leaden ball through the brain. Symptoms: a discharge of matter from one or both nostrils, enlargement of one or both glands under the jaw; when one nostril only is affected, the gland on the same side is almost invariably enlarged, the membrane lining the nose is pale or leaden in color, with ulcerations upon it. The discharge usually sticks to the nostrils like glue, and is sometimes white, but oftener grayish in color. These latter symptoms appear in other diseases of a catarrhal character from an acrid discharge from the nose. Glanders fully developed, is not easily confounded with other diseases, as the discharge becomes more glutinous, and adheres to the edges of the nostrils more

firmly, with increased tenderness of the swellings under the jaw, which now adheres closely to the jaw-bone; the discharge is somewhat streaked with blood, and of an offensive smell: there is a slight tumefaction of the under eye-lid, a swelling or elevation of the bones of the nose or forehead, loss of appetite, debility, sometimes cough, swelling of the legs and sheath, and sometimes lameness without any apparent cause, chancres or ulcerations within the nostrils. When these symptoms appear, the disease soon proceeds to a fatal termination. Since the commencement of the rebellion many experiments have been made with a view to discovering a cure for the disease, and with some prospect of success. The sulphate of soda, in ounce doses, three times a day, has been attended with partial success, and many cures are claimed through the agency of this simple remedy.

FARCY.

This disease I regard as an incipient stage of glanders, or as a type of the same fatal malady, and it is, to a certain extent, curable. There are two distinct varieties or stages of farcy: one, which is called button farcy, is altogether superficial, being confined to the lymphatic vessels of the skin, and readily yields to medical treatment; the other variety makes its appearance in the extremities, generally upon the inside of the hind legs, which become completely engorged, presenting a very uneven and lumpy appearance, excessively tender and painful to the touch. Small abscesses are formed, which at first discharge healthy pus, but soon ulcerate and discharge a thin, sanious matter. These abscesses first make their appearance on the inside of the hind legs, and then on the fore ones in like manner; the neck and lips come next in turn, and they may appear in

all parts of the body, when glanders will begin to manifest itself.

TREATMENT.—Give 1 oz. of the sulphate of soda three times a day; or corrosive sublimate, in 10-grain doses, twice a day; or nux vomica, in ½-drachm doses, twice a day. Sulphate of copper, in 2-drachm doses, has been used with decided advantage. The tumors should be opened and caustic silver or red-hot iron applied to each.

MANGE

This is a disease of the skin, identical with itch in the human family. The hair comes off in spots, which gradually blend together, causing scabby patches: the skin thickens and puckers along the neck.

TREATMENT.—Take the horse in the sun and scrub him thoroughly all over with castile soap and water; then wash him well from head to tail with gas-water, in which put two drachms white hellebore to the gallon. He must now be put into another stall distant from the one in which he has been standing. Thus treated it rarely requires more than one washing to effect a permanent cure. The harness should be thoroughly scrubbed and put away for six or eight weeks. These precautions are necessary to success in this otherwise troublesome disease.

SURFEIT.

This is a scurfy eruption all over the body, arising from an impure condition of the blood, causing plethora in one animal, and general debility, etc., in another. The legs swell, the hair is rough and staring, the membrane lining in the nose presents a bluish cast.

Give the following: Barbadoes aloes, 1 oz.; nitrate of potassa, 2 drs.; gentian, 1 dr.; make into a ball with water; follow this with the following powder: nitrate of

potash, 2 oz.: pulverized sulphur, 6 oz.; black antimony 2 oz.; mix and divide into 16 powders; give one morning and night.

HIDE-BOUND.

Any derangement of the system has a tendency to produce this condition in the skin. Medicines of an alterative character are here indicated; the most successful are: sulphur, pulverized, eight ounces; nitrate of potassa, pulverized, three ounces; black antimony, pulverized, two ounces; sulphate of iron, four ounces; mix all together, and give one tablespoonful, twice a day Or, Barbadoes aloes two ounces, nitre one ounce, gentian one ounce; mix and divide into sixteen powders, one to be given at night and one in the morning.

LOCKED-JAW.

This is one of the most troublesome and uncertain diseases with which the veterinary surgeon has to combat; it is technically call tetanus. It arises generally from nail wounds in the feet, sharp, metallic substances taken into and wounding the stomach, or stones in the stomach or intestines; bots are said occasionally to be the cause of locked-jaw, etc., etc, The first symptoms of the disease are observed about the ninth or tenth day after the injury is done, which are a straggling or stiffness of the hind legs, to which succeeds, in a few days, the following: on elevating the head, a spasmodic motion of the membrane in the inner corner of the eye will be observed, showing little more than the white of the eye, the muscles of the jaws become rigid, the tongue is swollen and the mouth is filled with saliva, the ears are erect, the nose poked out, the nostrils expand, the respiration becomes disturbed, and finally the jaws become firmly set, and the bowels are constipated.

TREATMENT.—That which I have found most successful is the early administration of the following: tincture of aconite, two drachms, tincture of belladonna, two drachms, water, one half ounce; mix and give forty drops, every four hours, on the tongue. Keep a ball of aloes in the mouth for several days; there is no fear of giving too much; I have frequently given half a pound in the course of a few days, with good results. Hydrocyanic acid, twenty drops, in a little water, and put upon the tongue every four hours, is an excellent remedy. Foment the jaws with bags of hops steeped in hot water, and bathe the line of the back from the pole to the croup with mustard and vinegar; be careful not to allow the animal to be unnecessarily excited by noises and bustle about him, but go about him very quietly; keep a pail of bran slop before him all the time. If the foot has been injured, poultice with flaxseed meal, and keep the wound open until healthy action has been established.

RHEUMATISM.

This a common disease in some localities, as it is in the human family; the animal appears stiff and sore, the lameness shifting from one limb to another, the joints sometimes become swollen and painful to the touch, the animal appearing better or worse, according to the season of the year and the condition of the atmosphere.

TREATMENT.—Open the bowels with the following: calomel one drachm, Barbadoes aloes, four drachms, alcohol two drachms, linseed meal two drachms, molasses enough to make into a ball; follow this with pine tar, one-half ounce, made into a ball with flax-seed meal; give one every morning. Poultice the feet with flaxseed meal four parts, ground mustard, one part, for several days, and

bathe the affected limbs with the following liniment; oil of turpentine, tincture of opium, soap liniment, of each one ounce, tincture of capsicum, one drachm; mix all together; shake well before using.

CRAMP.

This disease baffles the judgment of the most experienced horsemen, often creating unnecessary alarm from the peculiar manner in which the animal is handled.

Symptoms.—The horse appears well in body and limb, until efforts are made to move him; he then appears to have lost all power of motion in one of his legs, usually the hind ones; it is firmly planted on the ground, and the most powerful man fails to move it. On compelling the animal to move, the leg drags behind as though it were dislocated. Upon striking him with the whip he frequently will take two or three natural steps, and the leg drags as before:

Treatment.—Hand rubbing is very necessary, and use the following liniment upon the affected part; alcohol, one pint; tincture of camphor, one half pint; tinture of opium four ounces; mix all together.

WARTS.

When the warts have necks, all that is necessary for their removal is a piece of silk tied tightly around them as closely to the roots as possible; in a few days they will slough away; or if they are larger at their base, pass a needle armed with a double thread through the wart as near the root as possible, and tie each way so as to cut off the circulation of the blood, and it will soon die and come away; or paint it over with the permanganate of potash once a day for a week; or use the caustic potash

in the same manner; either of these remedies usually answers the purpose.

SADDLE-GALLS.

These are too well known to horsemen to require any special remarks regarding their cause, etc.

TREATMENT.—Bathe the parts two or three times a day with equal parts of tincture of myrrh and tincture of aloes; or, collodion, one ounce; castor oil, two ounces; mixed together; or, glycerine is a very good remedy.

DISEASES OF THE EYE.—AMAUROSIS, OR GUTTA SERENA,

Commonly called glass eye. In this disease the eyes have a peculiar glassy appearance, with an enlarged or expanded pupil. The eyes are clear and show no indications of disease to the ordinary observer, yet the animal is partially or wholly blind. The cause is paralysis of the optic nerve, the best means of detecting which is to expose the eye to different degrees of light, which, when disease exists, makes no impression on the pupil whatever; while in a sound eye the pupil contracts when exposed to a strong light, and expands when removed to a weaker light, or when removed to a dark place. An animal affected with amaurosis will run against any object in his way, and present all other symptoms of a horse blind from any other cause.

TREATMENT.—Give a strong purge; follow this twice a day with half-drachm doses of nux vomica, mixed in the feed: apply a fly blister back of the eye, and give bran mashes for a few days. No corn should be used until the sight is restored.

INFLAMMATION OF THE HAW,

As it is commonly called, also known as the Hooks. This is a swelling from inflammation of the membrane in the inner corner of the eye, called the membrana nictitans; its office or function is to cleanse the eye of dirt or other substances getting into it.

TREATMENT.—This is simple and effective; open the bowels with the aloes ball recommended in rheumatism, and apply the following wash: tincture of opium one ounce; rain water, one pint; mix together and bathe the eye three or four times a day. Do not be persuaded to cut out this membrane of the eye, as its removal does injury by impairing its functions.

SIMPLE OPHTHALMIA.

This disease arises from some external injury, as a blow upon the eye, or from a foreign body getting into it, causing inflammation to ensue; the eye becomes swollen, very sensitive and watery.

TREATMENT.—Open the vein under the eye, and let it bleed until it stops of itself. Open the bowels, and use the following wash: tincture of opium, six drachms; tincture of aconite, two drachms; rain-water, one pint; mix all together, and bathe the eye three times a day; or, use belladonna, one ounce, rain-water, one pint; mix, and bathe the same.

SPECIFIC OPHTHALMIA.

This is called by horsemen, moon-blindness, from its periodical appearance; supposed by some persons to be governed by the moon. The eyes in this disease become watery, and a white film covers the entire ball of the eye. When this disease once appears, we may look for its ter-

mination in blindness. The eyes may be cleared up a few times, but eventually the animal goes blind.

TREATMENT.—Open the bowels freely with the aloes ball, and give internally one of the following powders in the feed, night and morning: colchicum root, pulverized, one ounce; linseed meal, two ounces; mix and divide into twenty powders. Bathe the eye with the following: belladonna, one ounce; rain-water, one pint; or, nitrate of silver, eight grains; distilled water, four ounces, mix; or, sulphate of zinc, one-half drachm; diacetate of lead, one drachm; water, one and a half pints; or, take a piece of sulphate of copper (blue stone), shave it thin and smooth, and pass it carefully between the eyelid and the eyeball twice a day until the eye is cleared up.

CATARACT.

This disease is usually the result of termination of specific ophthalmia, causing an opacity or breaking up of the crystalline lens, situated directly behind the pupil, presenting a white and cloudy appearance in the centre of the eye, and causing partial or total blindness. Little can be done by way of treatment in this disease as it occurs in the horse.

RECAPTULATION OF REMEDIES.

LAMPASS.—Lancing.

BAGS OR WASHERS.—Cutting, and apply alum water or tincture myrrh and water, equal parts.

SORE MOUTH.—Tinctures myrrh, aloes and water equal parts.

UNEVEN TEETH.—Filing.

WOLF-TEETH.—Extracting with dentist's forceps.

CARIES OR DISEASED TEETH should be extracted.

SORE THROAT.—Mustard paste with vinegar, or linseed oil, two parts, ammonia one part, applied outwardly. Powdered saltpetre, half-tea-spoonful, upon tongue, twice a day.

STRANGLES.—Flax seed poultice, steam nostrils, and lancing. Veterinary surgeon if possible.

INFLUENZA.—Tincture of aconite or bryonia, ten drops in water every six hours for two days, then spirits nitre 1 oz., extract belladonna, 2 dr., in a pail of water once a day. A powder of gentian root, salt-petre and anise-seed each 1 oz., sulphate of quinine, 1 dr.; mix and divide into eight powders; give three times a day in feed; or powdered cinchona and powdered quassia, each 2 oz., powdered anise-

seed, 1 oz.; mix and divide into four powders, and give three times a day in feed. Bathe throat in mustard and vinegar, or with linseed oil, 3 oz. and ammonia, 1 oz., mixed.

Bronchitis.—A ball of nitrate of potassa, pulverized digitalis, and tartrate of antimony, each ½ dr., molasses sufficient to make the ball, once in twelve hours till fever is broken ; then nitrate of potassa 1½ oz., nitrate of soda 6 oz.; mix and divide into six powders ; twice a day in mash ; or extract belladonna, 1 dr., spirits nitre, 1 oz., solution of acetate of ammonia, 4 oz., in half pint of water as a drench. Blister throat and sides with fly-blister and turpentine, or mustard, ammonia and water. Rub in with the hand.

Nasal Gleet.—Give night and morning one of the following powders ; Sesquichloride of iron, 2 oz., powdered cinnamon 1 oz.; mix and divide into four powders ; or carbonate of iron, pulverized gentian, and pulverized quassia, of each 1 oz.; divide into four powders ; or nux vomica, pulverized, ½ oz.; linseed meal, 2 oz.; divide into 8 powders. Another good preparation is muriate of barytes, ½ oz.; linseed meal, 1 oz.; divide into eight powders.

Broken Wind or Heaves.—Divide half an ounce of pulverized digitalis in 20 parts, and give one part night and morning in the feed, until gone ; or take assafœtida, 2 drs., camphor, 1 dr., mix and give every other night for a week.

Inflammation of the Bowels.—Bleed from neck, give 10 drops tincture aconite every three hours, apply hot wet blankets, inject tobacco-smoke or soap and water. No food for forty-eight hours.

Diarrhœa.—Give every six hours, until checked ; powdered opium, one dr.; powdered catechu, 2 drs.; prepared chalk, 1 oz.; mix and divide into four powders.

Colic, Spasmodic.—Give one ounce tincture opium and one ounce sulphuric ether in half a pint of water; repeat in half an hour, if relief is not obtained. Or give the following; tincture of opium, 1 oz; aromatic spirits of ammonia, ½ oz.; extract of belladonna, 1 dr.; water, 1 pint; mix. In *flatulent* colic, give chlorate of potash, ½ oz.; sulphuric ether, ½ oz.; tincture of aloes, 3 oz.; water, 1 pint; mix and drench.

Worms.—Calomel, ½ dr.; tartrate of antimony, ½ dr.; linseed meal, ½ oz.; mix and give at night; or iron filings, 2 drs.; common salt, ½ oz.; powdered savin, 1 dr.; linseed meal, ½ oz.; mix; give every night for a week; or assafœtida, 2 drs.; calomel, 1½ drs.; savin 1½ drs.; oil male fern, 30 drops; linseed meal, 2 drs.; mix with molasses and give at night; or calomel, 1 dr.; powdered wormwood, 1 oz.; honey sufficient to make the ball; give at night. Follow either of the above with the following ball; Barbadoes aloes, 1 oz.: pulverized gentian, 2 drs.; pulverized ginger, 1 dr.; water sufficient to make the ball. Another remedy. Barbadoes aloes, 6 drs.; male fern, 4 oz.; spirits turpentine, 2 oz.; mix and divide into six balls; give one three times a day.

Retention of Urine.—Give a ball every night of powdered opium, ½ oz.; powdered kino, 1 oz.; prepared chalk, 1 oz., mixed with molassss and made into six balls.

Stone in Bladder.—Muriatic acid, 2 drs., in a pail of water once a day.

Quitter—Flax-seed meal poultice till soft, then cut away. Inject once a day, chloride of zinc, 2 drs., dissolved in one pint of water; or sulphate of zinc, 1½ drs., dissolved in one pint of water; nitrate of silver, 2 drs., in a

pint of water; or glycerine may be used with advantage. Before using the wash, have the foot well cleaned with castile soap and water.

Thrush.—Wash the feet well with soap and water, and sprinkle a small quantity of pulverized sulphate of copper in the cleft, and secure it by pressing a little raw cotton.

Canker.—Take equal parts of pine tar and lard, add sulphuric acid while melting; apply to foot; or use collodion, ½ oz.; castor oil, 1 oz.; mix and apply to the parts.

Scratches.—Wash parts in soap and water, and apply once a day; Collodion, ½ oz.; castor oil, 1 oz.; or apply once a week a saturated solution of bichloride of mercury.

Grease Heels.—Give a ball of Barbadoes aloes, 1 oz.; pulverized gentian root, 2 drs.; pulverized ginger, 1 dr.; water sufficient to make the ball. Wash the parts well, and poultice for two or three days with the following: Flaxseed meal mixed with a solution of 2 drs. sulphate zinc to a pail of water; bathe frequently with glycerine, or a solution of zinc, or a solution of chloride of lime.

Water Farcy. — Give one of the following powders, night and morning, in the feed: Sulphate of iron, 2 oz., nitrate of potassa, 1 oz.; pulverized gentian, 1 oz.; pulverized ginger, 6 drs.; anise-seed, ground, ½ oz.; mix and divide into eight powders; or sulphate of copper, nitrate of potassa, and pulverized gentian, of each 1 oz.; pulverized ginger, ½ oz.; anise-seed, ground, 6 dsr.; mix and divide into eight powders. Rub hard and exercise moderately.

FOUNDER.—If the animal is in full condition, bleed freely from the feet, and give the following: Barbadoes aloes, 6 drs.; croton oil, 6 drops; pulverized ginger, 1 dr.; pulverized gentian, 2 drs.; mix with water in form of ball; foment the feet well with hot water, and then poultice with flaxseed meal for several days; give in the water every six hours, extract of belladonna, 1 dr.

SHOULDER STRAIN.—Bleed freely from the planter vein running down upon the inside of the front legs. Foment the shoulders well with hot water if the case is a recent one. If of long standing, a seton will be more effective. The following liniment will be a useful application: Sweet oil 1 pint; spirits of hartshorn, 3 oz.; spirits of turpentine, 2 oz.; mix all together; shake well before using; or alcohol, 1 pint; spirits of camphor, tincture of myrrh, castile soap, of each 1 oz.; mix all together; or oil of turpentine, 1 oz.; tincture of opium 1 oz.; soap liniment, 1 oz.; tincture of capsicum, 1 dr.; mix all together.

CAPPED HOCK.—Blister; tincture of iodine, or iodine ointment, is useful.

BONE SPAVIN.—When there is external enlargement, active blisters should be applied over the part. Liquid blister: Powdered croton seeds, ½ oz.; powdered cantharides, 1 oz.; oil of turpentine, 1 pint; olive oil, 1 pint; mix all together, and shake well before using.

CURB.—In recent cases the part should be bathed with tincture of iodine once a day; or use iodine ointment. Take a little blood from the sephena vein on the inside of the hind leg, above the hock. Should this not succeed, blisters must be resorted to.

Blood or Bog Spavin.—Use cold water compresses, placed upon the joint for six or eight weeks, by means of a leathern socket made to fit it. Old woolen or muslin cloth is best.

Palpitation of the Heart.—The worst cases yield in two hours to the following simple treatment: Divide 1 dr. of digitalis into five powders, and give one every fifteen minutes, on the tongue.

Inflammation of the Brain.—Open the jugular vein as quickly as possible. It should be done before the mad stage comes on, or it is too late to be of much service. Open the bowels freely; give the following: Barbadoes aloes, 1 oz.; croton oil, 10 drops; ginger, 1 dr.; gentian, 1 dr.; mix with molasses or honey. Give tobacco-smoke injections if convenient, or soap and water will answer the purpose; give, on the tongue, every two hours, 10 drops tincture of aconite, until eight doses have been given, and then stop the aconite; give cold water to drink and apply cold water bandages to the head, or bags of ice would be better; give no food for twelve hours after relief is obtained.

Stomach Staggers.—Give the purging ball recommended in inflammation of the brain, and bleed freely from the jugular vein; give no food for forty-eight hours; this is all the treatment the animal requires.

Poll-Evil.—Give the following powder: Pulverized sulphur, 1 lb.; black antimony, in powder, ½ lb.; mix together; dose, one table-spoonful morning and night in the feed. No corn nor corn meal should be given. Open the bowels with aloes or linseed oil. Lay the tumor open

with a knife, and inject into the opening a solution of sulphate of zinc, 2 drs., to 1 pint of water, or the tincture of iodine is very good; sulphuric acid is used in some cases but it is a dangerous remedy.

GLANDERS.—Sulphate of soda, in 1 oz. doses, three times a day, has been attended with partial success; but powder and ball, applied through the medium of a rifle, is the only *sure* cure we know of.

FARCY.—Give one ounce of sulphate of soda three times a day, or corrosive sublimate, in ten-grain doses, twice a day; or nux vomica, in ½ dr. doses, twice a day. Sulphate of copper, in 2 dr. doses, has been used with decided advantage. The tumors should be opened, and caustic silver or red-hot iron applied to each.

MANGE.—Take the horse in the sun and scrub him thoroughly all over with castile soap and water, then wash him well from head to tail with gas water, in which put 2 drs. white hellebore to the gallon. Put him in a different stable and use clean harness.

SURFEIT.—Give the following: Barbadoes aloes, 1 oz.; nitrate of potassa, 2 drs.; gentian, 1 dr.; make into a ball with water; follow this with the following powder: nitrate of potash, 2 oz.; pulverized sulphur, 6 oz.; black antimony, 2 oz.; mix and divide into sixteen powders; give one morning and night.

HIDE-BOUND.—Take sulphur, pulverized, 8 oz.; nitrate potassa, pulverized, 3 oz.; black antimony, pulverized, 2 oz.; sulphate of iron, 4 oz.; mix together; give 1 tablespoonful twice a day. Or, Barbadoes aloes, 2 oz.; nitre, 1 oz.; gentian, 1 oz.; mix and divide into sixteen powders to be given night and morning.

Rheumatism.—Open the bowels with the following; Calomel, 1 dr.; Barbadoes aloes, 4 drs.; alcohol, 2 drs; linseed meal, 2 drs.; molasses enough to make into a ball; follow this with pine tar, ½ oz., made into a ball with flaxseed meal; give one every morning. Poultice the feet with flaxseed meal, 4 parts, ground mustard, 1 part, for several days; and bathe the affected limbs with the following liniment: Oil of turpentine, tincture of opium soap liniment, of each 1 oz.; tincture of capsicum, 1 dr.; mix all together; shake well before using.

Cramps.—Hand-rubbing is very necessary, and use the following liniment upon the affected part; alcohol, 1 pint; tincture of camphor, ½ pint; tincture of opium, 4 oz.; mix all together.

Saddle-Galls.—Bathe the parts two or three times a day with tincture of myrrh and tincture of aloes, equal parts; or collodion, 1 oz.; castor oil, 2 oz, mixed; or glycerine.

Amaurosis,—Give a strong purge; follow this twice a day with ½ dr. doses of nux vomica mixed in the feed: apply a fly-blister back of the eye. Give no corn until sight is restored.

The Hooks.—Open the bowels with the aloes ball recommended in rheumatism, and apply the following wash. Tincture of opium, one ounce, rain water, one pint; mix together, and bathe the eye three or four times a day. Do not be persuaded to cut out this membrane of the eye as its removal does injury by impairing its function.

Simple Ophthalmia.—Open the vein under the eye and let it bleed until it stops of itself. Open the bowels

and use the following wash; Tincture of opium, six drachms, tincture of aconite, two drachms, rain water, one pint; mix all together and bathe the eye three times a day; or use belladonna one ounce, rain water, one pint; mix and bathe the same.

Specific Ophthalmia.--Give in the feed, night and morning, colchicum root, pulverized, one ounce, linseed meal, two ounces; mix and divide into twenty powders. Bathe the eye with the following; Belladonna, one ounce, rain water, one pint; or, nitrate of silver, eight grains, distilled water, four ounces, mix; or, sulphate of zinc one-half drachm, diaceate of lead, one drachm, water, one and one-half pint; or, take a piece of sulphate of copper (blue stone), shave it thin and smooth, and pass it carefully between the eyelid and the eyeball twice a day until the eye is cleared up.

For Fermenting Swollen or Stocked Legs.—Procure one pound of smartweed, place the same in an eight gallon kettle—add four gallons of soft water, place over a slow fire and boil down to two gallons, strain the solution into another iron or tin vessel; get one pound of alum, place in a mortar and pulverize fine; sift the alum into the liquid, again place over the fire and stir until well dissolved. Now wind the limb tight with a hay rope, pour one pint of the solution in at the top of the bandage when blood warm; repeat every hour for forty-eight hours. This is the best fomentation used; it will remove all inflammation and swelling in two days. If there is a cut or wound, after fomenting, apply blue ointment No. 3 until healed. In case of strain or bruise apply a general liniment.

Blue Ointment.—Take half an ounce of verdigris, one

ounce of blue vitrol, four ounces of ointment of rosin, one ounce spirits of turpentine, grind all fine, mix well with one pound lard, and it is fit for use. Common rosin will do if the ointment is not convenient.

Spavin and Ringworm Ointment.—Take two ounces cantharides, one ounce gum ophorboum, two ounces turpentine, one ounce tincture iodine, and three drachms corrosive sublimate. Grind all fine, and mix with two pounds of lard.

To stop Blood.—If you can get hold of the artery or vein, tie it up; if not, take the following: ten grains of nitrate of silver and four ounces of water; apply it to the wound, and it will stop immediately. Apply this to warts after cutting them out.

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